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THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

VOL. XIX. THIRD SERIES, 1912

2754/63/3

JOURNAL

OF

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

NOVEMBER 1911—OCTOBER 1912

VOLUME XIX. THIRD SERIES

LONDON
No. 9, CONDUIT STREET, REGENT STREET, W.
1912

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Spottiswoode & Co. Ltd., Printers, London, Colchester and Eton.

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Books and Pamphlets.

ARCHITECTS' TECHNICAL BUREAU—Architects' Standard Catalogues 1911–1914. Vol. 1. Building materials. Vol. 2. Decorative materials. Vol. 3. Ironmongery and joinery. Vol. 4. Iron and fireproof construction. Vol. 5. Sanitary and water supply. Vol. 6. Warming and ventilation. Vol. 7. Lighting and fittings. Vol. 8. Work and fittings for special buildings. 8 vols. fo. Lond. [1911]

ARNOLD (EDWARD), the Publisher—HOWE (J. ALLEN)—The geology of building stones. 8o. Lond. 1910

ARSONI (EUGENIO), the Author—Le case sane economiche e popolari del Comune di Venezia. 8o. Bergamo 1911

AUCTIONEERS' INSTITUTE (THE) — GRIFFITHS (HAROLD)—Defects in buildings and their effect on valuation. pam. 8o. Lond. 1912

BATSFORD (B. T.), the Publisher—ADAMS (MAURICE B.)—Modern cottage architecture. Illustrated from works of well-known architects. 2nd ed. 8o. Lond. [1912]

ASHBEE (C. R.)—Should we stop teaching art? 8o. Lond. [1911]

BRIGGS (R. A.)—Pompeian decorations. fo. Lond. 1911

GARDNER (J. STARKIE)—English ironwork of the XVIIth and XVIIIth centuries. An historical and analytical account of the development of exterior smithcraft. 8o. Lond. [1911]

GODFREY (WALTER H.)—The English staircase. An historical account of its characteristic types to the end of the XVIIIth century. 4o. Lond. 1911

MARKS (PERCY L.)—The principles of planning buildings. An analytical treatise for the use of architects and others. 3rd ed. 8o. Lond. 1911

RICHARDSON (A. E.) and GILL (C. LOVETT)—London houses from 1660 to 1820. A consideration of their architecture and detail. 8o. Lond. 1911

TAYLOR (F. NOEL)—Small water supplies. Being a practical treatise on the methods of collecting, storing and conveying water for domestic use in large country mansions, estates and small villages and farms, &c. 8o. Lond. [1911]

BATSFORD (HERBERT)—BLOXAM (MATTHEW)—The principles of Gothic architecture elucidated by question and answer. 8o. Lond. 1829

BILSON (JOHN) *Fellow*—La date et la construction de l'église abbatiale de Bernay. Nouvelles observations par le Chanoine Porée. 8o. Caen 1912

—— Les voûtes de la nef de la cathédrale d'Angers. [Extrait du Compte-rendu du LXXVII^e Congrès archéologique de France.] pam. 8o. Caen 1912

—— The plan of the first cathedral church of Lincoln. [Reprinted from *Archæologia*, vol. lxii. pp. 543–562.] pam. 4o. Oxford 1911

BLACKWELL (B. H.), the Publisher—COLE (F. J.)—An analysis of the church of St. Mary, Cholsey, in the county of Berkshire. 8o. Oxford 1911

BOLTON (ARTHUR T.) *Fellow*—Chilham Castle, Canterbury, Kent. (E. W.-B. Memorial.) 4o. n.p. 1912

—— Jacobean architecture and the work of Inigo Jones in the earlier style. fo. Lond. 1911

BRINCKMANN (A. E.), the Author—Das Werden der Renaissance an der Mittel-Loire. pam. fo. [Berlin] 1912

Frankreichs klassische Stadtbaukunst. [*Architektonische Rundschau*, 28 Jahr., Heft 8.] pam. fo. [Esslingen a. N. 1912]

BULLOCK (A. E.) *Associate*—WEISSMAN (A. W.)—Hendrik de Keyser en Nicholas Stone. fo. n.p. [1911]

CAMBRIDGE UNIVERSITY PRESS, the Publishers—WATSON (JOHN)—British and foreign building stones. A descriptive catalogue of the specimens in the Sedgwick museum, Cambridge. 8o. Cambridge 1911

CARDEN (ROBERT W.) *Associate*—AREZZO—Giorgio Vasari. Numero unico edito a cura degli studenti Aretini. 30 Luglio 1911. pam. fo. Arezzo 1911

CEYLON (GOVERNMENT OF)—ARCHÆOLOGICAL SURVEY OF CEYLON—Epigraphia Zeylanica, being lithic and other inscriptions of Ceylon. Ed. and trans. by Don Martino de Zilva Wickremasinghe. 4o. Lond. 1911

North-central and central provinces. Annual report, 1906. By H. C. P. Bell. fo. Colombo 1910

———— Annual report, 1907. By H. C. P. Bell. fo. Colombo 1911

CHADDOCK (GEO. A.)—Ventilation. Paper . . . read 27th November 1911, at a meeting of the Royal Scottish Society of Arts, Edinburgh. pam. 8o. Liverpool 1911

CONSTABLE & CO., LTD., the Publishers—CUBITT (HORACE)—Building in London. A treatise on the law and practice affecting the erection and maintenance of buildings in the metropolis. With . . . chapters . . . [on] the cost of building work in and around London, by H. J. Leaning, and, The Valuation, development, and rating of London property, by Sydney A. Smith. 8o. Lond. 1911

CORPORATION OF THE CITY OF LONDON—Calendar of letter-books preserved among the archives . . . at the Guildhall. Letter-book K. *Temp.* Henry VI. Ed. by Reginald R. Sharpe. 8o. Lond. 1911

"COUNTRY LIFE," LTD., the Publishers—WEAVER (LAWRENCE), Editor—Small country houses of to-day. 4o. Lond. [1911]

WEAVER (LAWRENCE), Editor—The house and its equipment. 4o. Lond. [1912]

COWPER (J. B. F.) *Associate, Pugin Student*, 1911.—Pugin Travelling Studentship 1911; report of tour in Lincolnshire, Northamptonshire, and parts of Norfolk and Rutland. MS. 4o. 1910

COX (HORACE)—V[INCENT], H.—Jérusalem sous terre. Les récentes fouilles d'Ophel, décrites par H. V[incent]. 4o. Lond. 1911

Underground Jerusalem. Discoveries on the Hill of Ophel (1909–11), by H. V[incent]. [*Trans. from the French.*] 4o. Lond. 1911

CROUCH (H. A.) *Fellow*—Consulting Architect to the Government of India—Annual report on architectural work in India for the year 1910–1911. fo. Calcutta 1911

DE GROOT (J. H.), the Author—Vormharmonie. Amsterdam [1912]

DISTRICT SURVEYORS' ASSOCIATION—The London Building Acts, 1894 to 1909. Skeleton frame buildings. . . . Deposit of drawings and calculations with the District Surveyor. fo. Lond. 1911

DÜLFER (MARTIN)—Creutz (Max)—Martin Dülfer. [4. Sonderheft der *Architektur des xx. Jahrhunderts.*] 4o. Berlin 1910

EDITORS AND PROPRIETORS—

Academy Architecture. 1911–12	Concrete. 1911–12
A Architectura Portugueza. 1911–12	Construction (Canada). 1911–12
American Architect. 1911–12	Construction Moderne. 1911–12
Architect. 1911–12	Gaceta de Obras Públicas. 1911–12
Architects' & Builders' Journal. 1911–12	Irish Architect. 1911–12
Architects' & Builders' Magazine. 1911–12	Journal of Decorative Art. 1911–12
Architectural Record. 1911–12	Notes & Queries. 1911–12
Architectural Review. 1911–12	Plumber & Decorator. 1911–12
Architectural Review Brickbuilder. 1911–12	Royal Architect. 1911–12
British Architect. 1911–12	Scottish Historical Review. 1911–12
Builder. 1911–12	Studio. 1911–12
Building News. 1911–12	Surveyor. 1911–12
	Zeitschrift für Christliche Kunst. 1911–12

EGYPT—Ministry of Finance. *Survey Department.* The archæological survey of Nubia. Bulletin No. 7. 8o. Cairo 1911

FOULIS (T. N.), the Publisher—Petrie (W. M. Flinders)—The arts and crafts of Ancient Egypt. 2nd ed. 8o. Lond. and Edinburgh 1910

GOODYEAR (WILLIAM H.), the Author—Brooklyn Museum measurements of 1910 in the spiral stairway of the Pisa Campanile. [Reprinted from the *American Journal of Archæology*, 2nd ser., vol. xv. (1911), No. 3, pp. 322–339.] pam. 8o. n.p. 1911

GOTCH (J. ALFRED) *Fellow*—The original drawings for the palace of Whitehall, attributed to Inigo Jones. [Reprinted from *The Architectural Review*, June 1912.] fo. Lond. 1912

HAUSZMANN (ALOIS) *Hon. Corres. Mem.*—A Magyar Királyi József Müegyetem új Epületei. [Text in Hungarian, German, and French.] ob. fo. Budapest [1911]

HÉBRARD (ERNEST)—Hébrard (Ernest) and Teiller (Jacques)—Spalato. Le palais de Dioclétien. Préface de Charles Diehl : Appendice de Gustave Jéquier. fo. Paris 1912

HILL (HENRY A.) *Essay Medallist*, 1909—The influence on architecture of modern methods of construction. [*Prize Essay*, 1909.] MS. fo. [1908]

HONEYMAN (HERBERT LEWIS) *Essay Medallist*, 1911—The design and construction of belfry stages and spires in stone and brick. [*Prize Essay*, 1911.] MS. fo. [1910]

HUDSON (E. W.) *Associate*—United States Metal Products Company—The new era in building. fo. [N. York 1912]

HUMPHREYS (G. A.) *Fellow*—Llandudno and District Field Club—Excursion . . . to the hill fortress, or hill-top camp, on Conway Mountain, known as Caer Lleon, &c. [Reprinted from the Club's *Transactions*, 1909.] pam. 8o. [Llandudno] 1909

ILLUMINATING ENGINEERING SOCIETY—Library lighting. [Reprinted from *The Illuminating Engineer.*] 8o. Lond. 1911

INDIA (GOVERNMENT OF)—Archæological Survey—Antiquities of Chamba State, by J. Ph. Vogel. Pt. 1. Inscriptions of the Pre-Muhammadan period. [New Imperial Series, vol. xxxvi.] 4o. Calcutta 1911

Archæological Survey : Western Circle—Progress report for year ending 31st March 1911. fo. [Bombay 1911]

——— Eastern Circle—Annual report . . . for 1910–1911. fo. Calcutta 1911

——— Frontier Circle—Annual report . . . for 1910–1911. fo. Peshawar 1911

——— Northern Circle—Annual progress report of the Supt., Hindu and Buddhist monuments, for year ending 31st March 1911. fo. n.p. [1911]

——— Annual progress report of the Supt., Muhammadan and British monuments . . . for year ending 31st March 1911. fo. Allahabad 1911

——— Southern Circle—Annual report of the Archæological Department, &c. fo. Madras 1911

——— Progress report of the Asst. Archæological Supt. for Epigraphy, for . . . 1910–1911. fo. [Madras 1911]

Conference of Orientalists—The conference of orientalists, including museums and archæology conference, held at Simla, July 1911. fo. Simla 1911

Director-General of Archæology—Classified catalogue of the library of the Director-General. . . . Supplement I. Acquisitions 1908–10. 8o. Calcutta 1911

——— Suppl. II. Additions 1911. 8o. Calcutta 1912

INGELOW (BENJAMIN) *Fellow*—Murray (Sir J. A. H.)—New English Dictionary. (*In progress.*) fo. Oxford 1912

JONES, LTD. (CHARLES), the Publishers—Modern Building Record—Vol. ii. and iii. 4o. Lond. 1911, 1912

KING (C. R. BAKER) *Associate*—The tower of St. Mary's Church, Bletchingley. [Reprinted from the *Surrey Archæological Collections*, vol. xxiv., pp. 169–172.] pam. 8o. Lond. 1911

LASTEYRIE (ROBERT DE) *Hon. Corres. Mem.*—L'architecture religieuse en France à l'époque romane, ses origines, son développement. 8o. Paris 1912

MARCHAL (EDMOND), the Author—Charles, Comte de Montalembert. pam. 8o. Brussels 1912

MASEY (FRANCIS EDWARD) *Fellow*—Zimbabwe : an architect's notes. [Extract from the *Proceedings* of the Rhodesia Scientific Association, vol. xi. pt. 1, pp. 37–56.] pam. 8o. Bulawayo 1911

MURRAY (JOHN), the Publisher—Fergusson (James)—History of Indian and Eastern architecture. Revised and edited, with additions. Indian architecture, by James Burgess and Eastern architecture, by R. Phené Spiers. 2 vols. 8o. Lond. 1910

NIZET (C.)—La résurrection de Philæ. pam. 8o. Paris 1911

PATENT OFFICE LIBRARY, the Library—Subject list of works on mineral industries. Part 2. Iron manufacture, alloys, and metallography. 8o. Lond. 1912

Part 3. Metallurgy, non-ferrous and general, assaying, and fuel combustion. 8o. Lond. 1912

PRESTATYN—Urban District Council—By-laws made . . . with respect to new streets and buildings in the urban district of Prestatyn. [Unofficial.] pam. 8o. Prestatyn 1912

ROBSON (PHILIP A.) *Associate*—School-planning. Being a practical treatise on the planning of British training colleges and schools. 4o. Lond. 1911

ROYAL ARCHITECTURAL INSTITUTE OF CANADA —An account of the fourth General Annual Assembly [1911]. [Extracted from the *Contract Record.*] pam. fo. n.p. [1911]

ROYAL INSTITUTE OF BRITISH ARCHITECTS—Town Planning Conference, London, 10th–15th October 1910.
Transactions. 8o. Lond. 1911

ROYAL SOCIETY—The record of the Royal Society of London. 3rd ed. 8o. Lond. 1912
The signatures in the first Journal-book and the Charter-book of the Royal Society, &c. fo. Lond. 1912

SAYER (CHARLES E.) *Associate*—House of Charity, in Soho—A few notes from the records of the house. Architectural notes by Charles E. Sayer. pam. 8o. Lond. [1910]

SIMPKIN, MARSHALL, HAMILTON, KENT & CO., LTD., the Publishers—Seager (S. Hurst)—Canterbury Cathedral. 8o. Lond. [1911]

SPIERS (R. PHENÉ) *Fellow*—Japan Society of London —On Japanese roofs. A paper by R. Phené Spiers, read before the Japan Society of London, 8th March 1911. pam. 8o. [Lond. 1911]

STATHAM (H. HEATHCOTE) *Fellow*—Suggestions for remodelling the front block of the National Gallery and laying out Trafalgar Square. pam. fo. Lond. 1912

TALBOT & CO., the Publishers—Power (Cyril E.)—English mediæval architecture. 2 vols. 8o. Lond. 1912

TENISON (A. H. RYAN-) *Fellow*—Colman (W. G.)—Normandy, Picardy, etc. fo. Lond. 1838

TIAN (GIULIO)—Comune di Ancona. Piano regolatore di ampliamento fuori Porta Cavour. Relazione al Sindaco. fo. Città di Castello 1911

TRANSACTIONS, REPORTS, and PROCEEDINGS of SOCIETIES, &c.

Aberdeen—Society of Architects. Annual report. . . 8o. [Aberdeen] 1912

Amsterdam—Maatschappij tot Bevordering der Bouwkunst. — Bouwkunst. Tweemaandelijksch Tijdschrift. 4o. 's-Gravenhage 1911–12
Architectura et Amicitia.—Architectura, vol. xix. fo. Amst. 1911

Athens—British School—Macmillan (George A.)—A short history of the . . . School . . . etc. 4o. Lond. 1911

Berlin—Architekten-Verein.—Zeitschrift für Bauwesen fo. Berlin 1911–12
Verbande deutscher Architekten- und Ingenieur-Vereine.—Mitglieder-Verzeichnis, xv. Jahrg.: 1912. 8o. Berlin, 1912

Brussels—Académie Royale de Belgique.—Bulletin de la Classe des Lettres. 8o. Brussels 1911–12
Annuaire. 8o. Brussels 1912
Société d'Archéologie de Bruxelles.—Annuaire. pam. 8o. Brussels 1911–12
Société Centrale d'Architecture—Bulletin mensuel. 8o. Louvain 1911–12
—— L'Emulation. fo. Louvain 1911–12
Société Royale d'Archéologie de Bruxelles—Annales. 8o. Brussels 1911–12

Calgary—Alberta Association of Architects—Year-book, 1911–12. 8o. Calgary 1911

Cambridge, Mass. Harvard University—Architectural quarterly of . . . University, March 1912. fo. Camb. Mass. 1912

Chatham—Royal Engineers' Institute—Journal. 8o. Chatham 1911–12

Chicago—Special Park Commission—Annual report. ob. 8o. Chicago 1912

Christiania—Norsk Ingeniör- & Arkitekt-Forening.—Teknisk Ugeblad. 4o. Christiania 1911–12

Colchester — Essex Archæological Society — Transactions, vols. xi. and xii. 8o. Colchester 1911

Cologne—Architekten- u. Ingenieur-Verein für Niederrhein und Westfalen. — Kölner technische Blätter. 4o. Cologne 1911–12

Colombo—Engineering Association of Ceylon—Transactions for 1912. 8o. [Colombo] 1912

Copenhagen—Kongelige Akademi for de Sk¢nne Kunster—xxiv. Aarsberetning. pam. 8o. Copenhagen 1912

Dublin—Royal Institute of the Architects of Ireland, —Journal. 4o. Dublin 1912
Architectural Association of Ireland—Constitution, by-laws, etc. 8o. Dublin 1911
Royal Society—Economic Proceedings. Vol. xi., No. 2. 8o. Dublin 1911
Scientific Proceedings. 8o. Dublin 1911–12
Royal Society of Antiquaries—Journal. 8o. Dublin 1911–12

Edinburgh—Architectural Association—Transactions. Vol. vii. 8o. Edinburgh 1912

Exeter—Devon and Exeter Architectural Society. Journal of Proceedings, 1910–11. 8o. Exeter 1911

Glasgow—Glasgow and West of Scotland Technical College—Annual report . . . 1911. 8o. Glasgow 1911
Royal Philosophical Society—Proceedings. 8o. Glasgow
Institute of Architects—Report of the Council, 1912. pam. 4o. Glasgow 1912
School of Architecture—Calendar, session. pam. 8o. Glasgow

Guildford—Surrey Archæological Society — Collections. Vol. xxiv. 8o. Guildford 1911

Hanover—Bund Deutscher Architecten—[Annual for 1911, etc.] 8o. n.p. 1911

Ithaca—Cornell University. President's report, 1910 8o. Ithaca, N. York 1911
—— Librarian's report 1910–11. pam. 8o. [Ithaca, N.York 1911]

Johannesburg—Association of Transvaal Architects—The African Architect, 1911–12. fo. Johannesburg 1911–12

Leeds—Yorkshire Archæological Society—Journal. 8o. Leeds 1911
——Extra ser., vol. ii. 8o. Leeds 1912
Annual report for 1911. pam. 8o. Leeds [1909]
Leeds and Yorkshire Architectural Society—Green book, 35th Session, 1911–12. 8o. [Leeds] 1912
School of Art—Dept. of Architecture—Prospectus . . . 1911–12. 8o. Leeds 1911

Lewes—Sussex Archæological Society—Collections. Vol. liv. 8o. Lewes 1911

Lisbon—Associação dos Archeologos Portuguezes—Boletim. 8o. Lisbon 1911

Liverpool—Liverpool Architectural Society—Sixty-third session, 1910–11. Annual report of proceedings. 8o. Liverpool 1911
University of Liverpool. Faculty of Arts. School of Architecture. Dept. of Civic Design Prospectus for the Session 1912–13. pam. 8o. Liverpool 1912
Examples of work done by the School. pam. 8o. n.p., n.d.

London—Architectural Association.—A.A. Notes. 4o. Lond. 1911–12
———— Brown Book. sm. 8o. Lond. 1912

LONDON — Architectural Association — Sketch Book. la. fo. Lond. 1911–12
—— Curriculum of the school of architecture, session 1912–13. 8o. Lond. 1912
British Archæological Association—Journal. 8o. Lond. 1911–12
Rules and List of Associates. pam. 8o. Lond. 1911–12
British School of Archæology in Egypt—Roman portraits and Memphis (iv.) fo. Lond. 1912
Engineering Standards Committee—Seventh report on work accomplished. 8o. Lond. 1911
—— Publications, Nos. 24, 55, 57. fo. Lond. 1912
Incorporated Committee on Water Regulations—Memorandum. pam. 8o. [Lond. 1912]
—— Specifications of standard water pipes and fittings; 2nd issue. pam. 8o. Lond. 1912
—— Model by-laws, etc. pam. 8o. Lond. 1912
Institution of Civil Engineers—Minutes of Proceedings. 8o. Lond. 1911–12
Charter . . . by-laws, and list of members. 8o. Lond. 1912
Institution of Mechanical Engineers—List of Members. 8o. Lond. 1912
—— Proceedings. 8o. Lond. 1911–12
Iron and Steel Institute—Journal. 8o. Lond. 1911–12
Junior Institution of Engineers—Journal and Record of Transactions, 1910–11. 8o. Lond. 1911
Lodge Quatuor Coronati—Transactions. Vol. xxiv. la. 8o. Margate 1911
London Master Builders' Association—Handbook and diary, 1912, etc. 8o. Lond. 1912
Royal Geographical Society—Geographical Journal. la. 8o. Lond. 1911–12
Royal Institution—List of members, . . . 1911. 8o. Lond. 1911
—— Proceedings. 8o. Lond. 1911–12
Royal Sanitary Institute—Journal. 8o. Lond. 1911–12
Royal Society—Proceedings. 8o. Lond. 1911–12
St. Paul's Ecclesiological Society—Transactions, vol. vii., pt. i. 4o. Lond. 1911
Society of Antiquaries—Proceedings. 8o. Lond. 1911
Society of Architects—Year-book, 1912. 4o. Lond. 1912
Society of Arts—Journal. 8o. Lond. 1911–12
Society for the Promotion of Hellenic Studies—Journal. sm. fo. Lond. 1911–12
Surveyors' Institution—Transactions. 8o. Lond. 1911–12
—— List of members. 8o. Lond. 1912
University College—Library. Catalogue of the periodical publications of Societies and Governments, etc. 8o. Oxford 1912
MADRAS—Madras Architectural Society—Report of proceedings . . . general meeting 15th Mar. 1912. pam. 8o. Madras 1912
MANCHESTER—Literary and Philosophical Society—Memoirs and Proceedings, 1911–12. 8o. Manch. 1911–12
Society of Architects—Forty-eighth annual report. 8o. Manch. 1912
Steam Users' Association—Memorandum . . . for the year 1910. pam. 8o. Manch. 1911
MELBOURNE—Royal Victorian Institute of Architects—Journal of Proceedings. 4o. Melbourne 1911–12
—— Architectural Students' Society—Journal of Proceedings, March 1911. 4o. Melbourne 1911
NAPLES—R. Scuola Superiore Politecnica in Napoli Nella ricorrenza del primo centenario 1811–1911. 4o. Naples 1911
NEWCASTLE-ON-TYNE—North of England Institute of Mining and Mechanical Engineers—Transactions. la. 8o. Newc.-on-Tyne 1911–12
Northern Architectural Association. List of members, etc. 8o. Newc.-on-Tyne 1911
—— Rules, etc. 8o. Newc.-on-Tyne 1911
NEW YORK—American Institute of Architects—New York Chapter. Year book, 1912. 8o. [New York 1912]
PARIS—Congrès Internationaux des Architectes—Comité permanent (section française) Fasc. ix. 8o. Paris 1912
Ecole Spéciale d'Architecture—Année 1911–12—Séance d'ouverture du 16 Octobre 1911. 8o. Paris 1911
Société Centrale des Architectes—Commission du Gros-Œuvre des Constructions. Recherches sur les conditions d'essais et de recettes des Ardoises de Couverture. 8o. Paris 1912
—— L'Architecture. fo. Paris 1911–12
Société de l'histoire de l'Art français.—Procès-verbaux de l'Académie Royale d'Architecture, 1671–1793, etc.
PHILADELPHIA—City Parks Association—Twenty-third annual report. pam. 8o. [Philadelphia] 1911
PRAGUE—Spolek Architektův a Inženýrů v Království Českém—Architektonický obzor, vol. xi. (*In progress.*) fo. Prague 1912
ROME—British and American Archæological Society Journal, vol. iv., no. 5. 8o. Rome 1912
British School—Eleventh annual report. 8o. [Lond. 1911]
Commissione Archeologica comunale di Roma. Bullettino, 1911. 8o. Rome 1911–12
Ministerio della P. Istruzione—Bollettino d'Arte. (*In progress*) fo. Rome 1911–12
R. Accademia di S. Luca—Annuario, 1909–1911. fo. Rome 1911
ST. PAUL, MINNESOTA—Board of Park Commissioners—Annual report. 8o. St. Paul 1912
ST. PETERSBURG—Société Impériale des Architectes—L'Architecte. fo. St. Petersburg 1911–12
STOCKHOLM—Svenska Teknologföreningens Afdelning för Husbyggnadkonst—Architektur. fo. Stockholm 1911
SYDNEY, N.S.W.—Institute of Architects of N.S.W.—Art and Architecture. fo. Sydney 1911–12
TOKIO—Institute of Japanese Architects—Journal. la. 8o. Tokio 1911–12
[List of members.] 8o. Tokio [1912]
URBANA—University of Illinois—Bulletins. Nos. 51, 52 and 56. 8o. Urbana, Ill. 1912
VIENNA—Osterreichischer Ingenieur- u. Architekten-Verein—Zeitschrift. la. 4o. Vienna 1911–12
—— Jahrbuch 1912. 8o. Vienna 1911
—— Zu Karl Königs siebzigsten Geburtstag, by K. M. 8o. Vienna 1912
WASHINGTON—American Institute of Architects—Proceedings of the Forty-fourth Annual Convention, 1911. 4o. Washington [1912]
—— Quarterly Bulletin. 4o. Washington 1911–12
—— Annuary for 1912. 8o. Washington 1912
VIRGIL (NAGY)—Vajdahunyad Vára. n.p., n.d.
UNWIN (RAYMOND) *Fellow*—NATIONAL CONFERENCE ON CITY PLANNING [U.S.A.].—Proceedings of the third national conference on city planning, Philadelphia, Penna., 15th–17th May 1911. 8o. Boston 1911
MANCHESTER UNIVERSITY—Warburton Lectures for 1912: Old Towns and New Needs: also the Town Extension Plan . . . by Paul Waterhouse and Raymond Unwin. 8o. Manchester 1912

WAGNER (OTTO) *Hon. Corres. Mem.*—Die Groszstadt, eine Studie über diese. pam. fo. Vienna 1911
Die Qualität des Baukünstlers. pam. 8o. Vienna 1912
WEAVER (LAWRENCE) *Hon. Assoc.*—SHUTE (JOHN)—The first and chief groundes of architecture, &c. A facsimile of the first [1563] edition with an introduction by Lawrence Weaver. fo. Lond. 1912
WHITTAKER & CO., the Publishers—FARROW (F. R.). Stresses and Strains. 2nd ed. 8o. Lond. 1912
WOOD (P. A. G.)—HENDERSON (BERNARD W.)—Merton College, Oxford. Historical and descriptive essay. fo. Lond. [1912]

TOTAL :—VOLUMES (*exclusive of Periodicals, Reports and Transactions of Societies, and Parts of Works issued in serial form, now in progress*)—134. PAMPHLETS—23.

DRAWINGS, ENGRAVINGS, &c.

CRACE (J. D.) *Hon. Assoc.*—KENT (WILLIAM)—Design for a ceiling. *D.*, n.d.
Design for the Prince of Wales' barge [1732]. *D.*, 1732
——— detail to scale of part of the cabin exterior facing the stern; also a design for the decoration of the stern. *D.* [1732]
Design for the House of Lords. A plan and sections drawn to scale. *D.* [1735]
DILETTANTI (SOCIETY OF), through Mr. George Macmillan—Collection of original drawings and of unpublished and published engravings prepared for the *Antiquities of Ionia* and the *Unedited Antiquities of Attica, &c.* [A catalogue of the drawings is in course of preparation.]
FRISKIN (WILLIAM)—Design for a Guildhall. Plans, sections, and elevations. 5 sheets. [Soane Medallion, 1912, certificate of hon. mention.] *E.* Lond. 1912
H.M. OFFICE OF WORKS—ABRAHAM (HENRY ROBERT)—Design for the Royal Courts of Justice. Plans. 7 sheets. fo. L. Lond. [1865]
BARRY (EDWARD MIDDLETON)—Design for the Royal Courts of Justice. Plans. 8 sheets. fo. L. Lond. [1865]
BRANDON (RAPHAEL)—Design for the Royal Courts of Justice. Plans. 11 sheets. fo. L. Lond. [1865]
BURGES (WILLIAM)—Design for the Royal Courts of Justice. Plans, with sections of the bridges at Temple Bar and Carey Street, and of one court. 7 sheets. fo. L. Lond. [1865]
GARLING (HENRY B.)—Design for the Royal Courts of Justice. Plans, with longitudinal and transverse sections. 14 sheets. fo. L. Lond. [1865]
LOCKWOOD (H. F.)—Design for the Royal Courts of Justice. Plans. 13 sheets. fo. L. Lond. [1865]
SCOTT (GEORGE GILBERT)—Design for the Royal Courts of Justice. Plans. 11 sheets. fo. L. Lond. [1865]
SEDDON (JOHN P.)—Design for the Royal Courts of Justice. Plans. 10 sheets. fo. L. Lond. [1865]
STREET (GEORGE EDMUND)—Design for the Royal Courts of Justice. Plans and sections. 11 sheets. fo. L. Lond. [1865]
SPIERS (R. PHENÉ) *Fellow*—LAYARD (A. H.)—Sketch plan of the palace of Al Hadhar [El Hadhr—Hatra]. On the reverse of the sheet is a sketch restoration of the façade of the palace. *D.* [1846]
WARREN (EDWARD) *Fellow*—TEULON (S. S.)—Miscellaneous architectural drawings. 117 sheets. *C.* 1839
WEBB (W. A.) *Associate*—LONDON—CHURCHES, &c.—Rolls chapel. Views of the chapel during its demolition. 3 sheets. *P.* [1895]

MODEL.

STATHAM (H. HEATHCOTE) *Fellow*—Model showing a suggestion for the design of Vauxhall Bridge as a concrete bridge with a granite revêtement.
——— photograph of the model. *P.* n.d.

TOTAL :—DRAWINGS, 122; ENGRAVINGS, 97; PHOTOGRAPHS, 4; MODEL, 1.

BOOKS PURCHASED.

Reference Library.

ADAMS (HENRY)—The mechanics of building construction. 8o. Lond. 1912
BAYARD (EMILE)—L'art de reconnaître les styles. Architecture—ameublement. 8o. Paris 1910
BAYLEY (HAROLD)—A new light on the Renaissance, displayed in contemporary emblems. 8o. Lond. 1909
BEGULE (LUCIEN)—La cathédrale de Lyon. 8o. Paris [1911]
BENOIT (FRANÇOIS)—L'Architecture. Antiquité [Ser. *Manuels d'histoire de l'art*]. 8o. Paris 1911
BESNARD (CH.-H.)—Le Mont-Saint-Michel. 8o. Paris [1911]
BLOMFIELD (REGINALD)—A history of French architecture from the reign of Charles VIII. till the death of Mazarin. [1494 to 1661.] 2 vols. la. 8o. Lond. 1911
BOINET (AMÉDÉE)—La cathédrale de Bourges. 8o. Paris [1911]
BURCKHARDT (JACOB)—Der cicerone. Eine Anleitung zum Genuss der Kunstwerke Italiens. Unter Mitwirkung von Fachgenossen bearbeitet von W. Bode und C. v. Fabriczy. 10th ed.
Erster Teil—Antike Kunst. 8o. Leipzig 1909
Zweiter Teil—Mittelalter und neuere Zeit. I. Architectur. II. Skulptur. 8o. Leipzig 1909–10
———III. Malerei. 8o. Leipzig 1910
Register. 8o. Leipzig 1910
CARRINGTON (THOMAS SPEES)—Tuberculosis hospital and sanatorium construction. Written for the National Association for the Study and Prevention of Tuberculosis. 8o. New York 1911
CECIL (EVELYN)—London parks and gardens. 8o. Lond. 1907
COLASANTI (ARDUINO)—Case e palazzi barocchi di Roma. fo. Milan [1912]
CRANE (WALTER)—Ideals in art: papers theoretical, practical, and critical. 8o. Lond. 1905
DALTON (O. M.)—Byzantine art and archæology. 8o. Oxford 1911
DAVIES (J.)—Building timbers and architects' specifications. Incorporated with which is part of Haworth's *Practical Timber Measurer*. 8o. Lond. 1910
DEMAISON (LOUIS)—La cathédrale de Reims. 8o. Paris [1910]
DETHLEFSEN (RICHARD)—Bauernhäuser und Holzkirchen in Ostpreussen. Mit Unterstützung der Königlich Preuss. Staats-Regierung und des Provinzialverbandes Ostpreussen gesammelt, &c. fo. Berlin 1911
DICTIONNAIRE DES ANTIQUITÉS—Quarante-sixième fasc. (Tabella-Textrinum.) 4o. Paris 1912
ELYOT (SIR THOMAS)—The boke named the governour. 4o. Londini 1546
FIELD (HORACE) and BUNNEY (MICHAEL)—English domestic architecture of the seventeenth and eighteenth centuries. A selection of examples of smaller buildings, &c. 4o. Lond. 1905
FLEURY (GABRIEL)—La cathédrale du Mans. 8o. Paris [1910]

GREAT BRITAIN AND IRELAND—Board of Education—Art Examinations. Examination papers and examiners' reports for the art examinations, 1911. 8o. Lond. 1911

Report for the year 1909 and 1910 on the Victoria and Albert Museum and the Bethnal Green Museum. 8o. Lond. 1911

The building regulations . . . for public elementary schools, . . . rules as to constructions, &c. [Cd. 3571.] fo. Lond. 1907

Building regulations for secondary schools and pupil-teacher centres: . . . rules as to constructions, &c. [Cd. 3865.] fo. Lond. 1907

Victoria and Albert Museum (Art division) Report of the committee of re-arrangement. (Adopted 29th July, 1908.) [Cd. 4389.] fo. Lond. 1908

Report on the Departmental Committee on the Science Museum and the Geological Museum. (Part II.) fo. Lond. 1912

Board of Trade—Report of the London Traffic Branch . . . 1911. [Cd. 5972.] fo. Lond. 1911

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Memorandum [viii.] on frescoes in the Houses of Parliament [by Prof. A. H. Church]. [Cd. 3085.] fo. Lond. 1906

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Report of the Select Committee on Public Offices Sites (Extension) Bill, &c. fo. Lond. 1908

Miscellaneous Papers—Reports from His Majesty's representatives abroad, showing the systems adopted in certain foreign countries for the preservation of ancient monuments. Miscellaneous. No. 7 (1912). [Cd. 6200.] fo. Lond. 1912

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HUDSON (ALFRED A.)—The law of building, engineering and ship-building contracts. Second supplement to the 3rd ed. 8o. Lond. 1912

JONES (INIGO)—[Facsimile of Inigo Jones' sketch book. A lithograph.] [4o. Lond. 1832]

JOURNAL—Les Salons d'Architecture. Soc. des Artistes français. Soc. Nationale des Beaux-Arts. 1912 8o. Paris 1912

The town planning review . . . Journal of the Department of Civic Design at the School of Architecture of the University of Liverpool. Ed. by P. Abercrombie and others. (*In progress*) 1911–

KEYSSNER (GUSTAV)—Das Gebäude der Universität in Jena. fo. Leipzig [1911]

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La Mercanzia: exterior view.
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Casa di Rispannio (A. Mengoni, Architect); Interior of portico.
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Baptistery: view of interior looking downwards, showing the pavement; Detail of bronze doors on the east side.
Pazzi chapel: interior of portico.
San Lorenzo: interior of the Capella dei Principi Interior of library.
San Miniato al Monte: interior view.

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PADUA—Equestrian statue of Erasmo da Narni (Gattamelata), by Donatello.
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DELAGARDETTE (C.-M.)—Les ruines de Pæstum ou Posidonia, ancienne ville de la Grande Grèce, &c. fo. Lond. 1840

JOURNAL—Gentleman's Magazine. The Gentleman's Magazine library; being a classified collection of the chief contents of the *Gentleman's Magazine* from 1731 to 1868. Edited by G. L. Gomme. Architectural antiquities. Part I. 8o. Lond. 1890

LEE (FREDERICK GEORGE)—A glossary of liturgical and ecclesiastical terms. 8o. Lond. 1877

LEWIS (SAMUEL)—A topographical dictionary of England, . . . with historical and statistical descriptions, &c. 5th ed. Text and atlas, 5 vols. 4o. Lond. 1842

———— Ireland, &c. 2nd ed. Text and atlas, 3 vols. 4o. Lond. 1842

A topographical dictionary of Scotland, &c. Text and atlas, 3 vols. 4o. Lond. 1846

———— Wales, &c. 2nd ed. 2 vols. 4o. Lond. 1842

LEYBOURN (WILLIAM)—The compleat surveyor, &c. 2nd ed. fo. Lond. 1657

MORRIS (ROBERT)—An essay in defence of ancient architecture; or, a parallel of the ancient buildings with the modern, &c. 4o. Lond. 1728

NOTES ON THE CAMBRIDGESHIRE CHURCHES. 8o. Lond. 1827

PALLADIO (ANDREA)—Andrea Palladio's Architecture, in four books . . . revis'd and redelineated by Edward Hoppus, . . . and embellish'd with a large variety of chimney pieces collected from the works of Inigo Jones and others. fo. Lond. 1735

PARKER (JOHN HENRY)—The archæology of Rome. Vol. i. 1. The primitive fortifications. ii. The walls and gates of Rome. ii. The historical construction of walls. 8o. Lond. 1874

———— vol. i., part 2, illustrations [to vol. i.] 8o. Lond. 1874

PETIT (J. L.)—Architectural studies in France. New edition, revised by Edward Bell. 8o. Lond. 1890

PETRIE (W. M. FLINDERS)—A history of Egypt from the earliest times to the XVIth dynasty. 2nd ed. 8o. Lond. 1895

———— during the XVIIth and XVIIIth dynasties. 8o. Lond. 1896

———— from the XIXth to the XXXth dynasties. 8o. Lond. 1905

PRIOR (EDWARD S.)—A history of Gothic art in England. 8o. Lond. 1900

The cathedral builders in England. 8o. Lond. 1905

RÁM RÁZ—Essay on the architecture of the Hindus. 4o. Lond. 1834

ROBINS (EDWARD COOKWORTHY)—Technical school and college building, &c. 4o. Lond. 1887

SOCIETY OF DILETTANTI—Ionian Antiquities. fo. Lond. 1769

Antiquities of Ionia. Part the second. fo. Lond. 1797

STORER (JAMES)—History and antiquities of the cathedral churches of Great Britain. Text and plates. 3 vols. 8o. Lond. 1814–17

STREET (GEORGE EDMUND)—Brick and marble in the middle ages: notes of a tour in the north of Italy. 8o. Lond. 1855

WALCOTT (MACKENZIE E. C.)—Church and conventual arrangement . . . illustrated by a series of ground-plans . . . of the arrangements of churches in different countries and at successive periods, and of the conventual plans adopted by the various orders. 8o. Lond. [1861]

Scoti-Monasticon. The ancient church of Scotland. A history of the cathedrals, conventual foundations, collegiate churches, and hospitals of Scotland. 4o. Lond. 1874

WOOD (ROBERT)—The ruins of Palmyra, otherwise Tedmor, in the Desart. fo. Lond. 1753

The ruins of Balbec, otherwise Heliopolis in Cœlosyria. fo. Lond. 1757

JOURNAL

OF

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

Seventy-seventh Session—1911–1912.

THE OPENING ADDRESS. Delivered by the President, Mr. LEONARD STOKES, at the First General Meeting, Monday, 6th November 1911.

SINCE I had the honour of addressing you last year we have passed through all the glories of a Coronation, and long may our beloved Patron George V. live to wear the crown, placed upon his head amidst so much rejoicing, and surrounded by so much pomp and splendour! Such an occasion naturally gives great opportunities to the architect and decorator, and I think we may congratulate ourselves upon the fine results achieved in many cases. It is, no doubt, to be regretted that more use was not made of our services; and that, when they were called in, our schemes were not more completely carried out. Nevertheless, the best results along the great processional route, and elsewhere, were produced undoubtedly—as might have been expected—by our noble selves and not by the commercial firms too often in evidence. It would be invidious to mention individual cases, but I should like to place it on record that the most effective, pleasing, and characteristic of the many great efforts to adorn our streets and buildings were those produced by architects. The only case of misplaced architectural genius that I noticed was the annexe to Westminster Abbey, erected "in the Gothic style" at large expense. Surely the culminating point of the great procession along an otherwise gaily decorated route should have been something better than a mere plaster sham?—supposed, no doubt, to be in harmony with the Abbey, but really a very poor compliment to it. One would have thought a fine marquee in gold and gorgeous colours surrounded by Venetian masts carrying flags, banners, and pennants much more suitable to the occasion than an impertinent imitation Gothic building.

Closely bound up with this same subject is the unfortunate *impasse* connected with the completion of the great processional road through St. James's Park. This road is in itself a fine thing, but how it came about that it has no proper opening into Trafalgar Square is quite incomprehensible, and, I fear, is another illustration of the hopeless manner in which our public improvements are invariably mismanaged. In this case a processional road starts from a palace, and leaves off, if you please, with a flourish of trumpets behind a row of houses which practically block its further progress. And when the houses have been dodged, further progress is effectually barred by an underground convenience! I should have thought that the possibility of getting properly and effectively into Trafalgar Square would have been the first thing to consider by those responsible for the scheme, instead of the last, and it now looks, I

fear, practically impossible ever to make a really good finish towards the Square without spending a further huge sum of money, which might have been avoided if the scheme had been properly thought out from the first, by all three of the large public bodies really interested in the scheme, instead of by one alone, which one went to work apparently without any regard to the other two until the last moment, when, alas, it was too late. Architects are unfortunately too often forced, by the near-sighted policy of their employers, into designing incomplete schemes of this sort, and get all the blame for so doing, whereas they of course can only do as they are bid, on the land at their disposal.

This brings us once more face to face with the fact that there really should be one authority responsible for the whole of London, and not several as at present. London with its seven millions of people is as important and probably as difficult to govern as many a European country; and instead of its City Corporation, its London County Council, and its two dozen or so of Borough Councils, with the Office of Works and the Woods and Forests thrown in, one would have thought that at least one Minister of the Crown—aided perhaps by a committee of experts—would have found work enough very profitably to engage his time, in looking after London, and seeing that its affairs were properly managed.

Mr. Waterhouse last session read us a most interesting paper on this subject, but I fear his suggestion of a Chief Architect acting with the architect from each Borough Council would probably cause friction and confusion, and I would much prefer to take, say, H.M. First Commissioner of Works, and—after divesting him of many of the duties he now performs—make him responsible for the proper domestic government of London. He should, of course, have a good deal of power, and some knowledge and taste. There are, I assure you, grave reasons for some change even from an architectural standpoint; take, for example, our street improvements. Most of us can remember when Piccadilly Circus was improved—into a hopeless muddle—and it is now proposed again to alter it, and make it very much what some of us in this Institute suggested at the time! But this, of course, now can only be done at a very much greater cost. Shaftesbury Avenue and Charing Cross Road are each wide thoroughfares, but both hopelessly laid out from a town-planning point of view. Kingsway is quite out of scale with its neighbourhood, and has, as I told you once before, two ends at one end, and no proper end at all at the other! The alterations at the Marble Arch have perhaps relieved the traffic but spoilt the appearance of the place, and the slice of Green Park that was thrown into the road by Hyde Park Corner has done no good whatever—though I believe it was done to please the police—and the ordinary rules of the road are not in force now at this spot, which will lead before long, I feel sure, to some horrible accident.

If we go a little further back still, what a great opportunity was missed when the land behind the Albert Hall was dealt with! This is now covered largely by public buildings, and yet none of them look well placed, neither do they tell as a group, as might have been the case had the land been properly laid out, as it certainly would have been in any other country but ours. This all shows that such work should not be left to amateur Committees or Corporations, driven this way and that, first by one consideration and then by another, but should be in the hands, as I have suggested, of, say, a Minister of the Crown, who should advise, control, and direct the various authorities now responsible for the government of London, and see that they worked together, and for the good of London as a whole, and that their various schemes and plans formed part of a comprehensive whole, arranged with due regard to the future.

Surely some general scheme for the improvement and development of London in the future should be at once got out, and might be taken in hand by the suggested Minister? In Rome we were recently shown a plan which is to be carried out during the next twenty years, and all the property so required has been scheduled and the price fixed, and any improvements on it can only be made at the owner's risk, knowing that it may be wanted at any time during

the next twenty years. We, however, do not appear to realise the importance of a comprehensive scheme, and the only people who do know, to some extent, that the public really likes well laid out and well designed buildings are those who run Exhibitions such as the White City. When will our Corporations learn the same lesson, and realise the fact that there is money in it too?

Take a concrete example which has been exercising some of us a good deal lately, viz., the Corporation of London Bridges Bill. This Bill was promoted by the Corporation of London and has now become an Act of Parliament, and provides for rebuilding Southwark Bridge, and for building a new bridge to be called St. Paul's Bridge close to it. Now we all know that the traffic in the City is already about as congested as it well can be, so what it will be like when fresh streams of traffic are created flowing to and from these two great new bridges, heaven only knows! It would seem a wiser policy to try rather to coax traffic away from the heart of the City instead of into it, particularly as the enormous cost of land tends very much to prevent improvements there being carried out on any very comprehensive scale. But the City has money to spend on bridges, so spend it it must, and in the City precincts, too, quite regardless of whether it might not be far better to go to work either higher up or even lower down the river. A Minister of the Crown might help us here.

One last word on St. Paul's Bridge. This Institute has for years been agitating, as you know, for proper architectural consideration for this bridge from the outset, and the Corporation turned a deaf ear to us. Parliament, however, came to our help and at the eleventh hour three well-known architects were called in to advise the Corporation. This was what we had been working for all along, and I think we should congratulate ourselves on having got what we asked for in the end. That some of us may have been disappointed at the form the advice took is not the point. The lay-out received architectural consideration before the Corporation got its Bill; and now we can only devoutly hope that if both bridges are gone on with, the Corporation will take such steps as will insure the designs of these two great bridges being as fine as it is possible to make them.

I should like to explain, however, the reason why we architects seem to be somewhat divided on the subject of St. Paul's Bridge. The reason is that there are two very different ways of looking at the subject; the first may be said to be the aspect *of* the bridge itself, and the second the aspect *from* the bridge. Unfortunately it is not easy to combine the two, and hence some of us took the view that the first thing to consider—apart from the great traffic problem—was what we saw from the bridge, and others what we saw when we looked at the bridge itself. Doctors are allowed to differ, so I must claim for our profession the same privilege. If not too late, however, I should like even now to suggest that Southwark Bridge might be rebuilt first so that we may see what effect it has upon the traffic. This course would have the further advantage of preventing the river and its vast floating traffic from being obstructed by works to two bridges so close together at the same time.

I have already suggested that my proposed new Authority might be the First Commissioner of Works after his present duties had been lightened. These I would lighten by very largely reducing the size and output of the huge architectural mill now running under his control. This mill turns out work just now of the annual value of £1,195,410, which large sum is spent on Palaces, Law Courts, Government Offices, Schools, Labour Exchanges, Museums, Post Offices and Telephone Exchanges, etc., etc., and on the maintenance of similar buildings over which the Office of Works has control.

Now it will be seen that the work turned out is very varied in its nature, but unfortunately very uniform in its architectural character. I want to be strictly fair in what I say, but I honestly think that the bulk of the work produced by the Office of Works is poor from an architectural standpoint. Some of it has been better of late, I admit, but let us take Post

Offices as their particular speciality. These may be seen in our towns all over the land, and are generally, as far as I have seen, pretentious and costly and devoid of those good qualities essential in really fine work, and their other buildings are very much the same.

So much for the quality of the work, now for the cost of production. The architectural staff which produces this work receives £71,849 per annum, or just about $6\frac{1}{4}$ per cent. on the outlay, for *salaries alone*, without any allowance for rent, rates, taxes, pensions, fees to specialists, cleaning, lighting, heating, porters, messengers, and various other sundries. Five or six years ago the salaries amounted to only about $3\frac{1}{2}$ per cent. on the amount expended, which was then about £400,000, or one-third of what it is now! Fifteen or sixteen years ago only about £250,000 was spent per annum, and the cost of architectural administration was only about 2 per cent.! These figures seem to show that the larger the office is, the more expensive it becomes per cent. to administer.

I maintain therefore that, as the work now produced by the Office of Works is not very good and not very cheap, the bulk of it might with advantage be put out to independent architects to be better done at a smaller cost, and so relieve the First Commissioner of Works very considerably. This you will see has the advantage of killing two birds with one stone, for we thus enable the First Commissioner to do work which we want him to do, and we free him from the work which we would much rather he did not do.

You must not think that I have any particular grudge against the Office of Works, or that I am finding fault with the many good friends I have on the architectural staff there, for my remarks are directed against all large public bodies who attempt to do their own architecture. The recent Congress at Rome passed a resolution to the effect that "Architectural works intended for the State, Municipalities, or other public bodies should only be entrusted to qualified architects after competition or otherwise." It will thus be seen that the architects all over the world are in accord, and in order to further prove the case I have looked up the cost—the quality speaks for itself—of the architectural work produced by the Admiralty and the War Office. Both of these authorities run large architectural departments spending in round figures about a million and a half per annum each, the former at a cost of about 7 per cent. and the latter about 10 per cent. in *salaries alone*, and in neither case, of course, including the cost of rent, rates, pensions, cleaning, lighting, heating, etc., which, if added, would probably raise the cost by about another 1 or $1\frac{1}{2}$ per cent.

I should like to have been able to include the London County Council in my list, but I can find no published figures on the subject. I am told, however, on good authority, that the Architectural Department of this body is run very economically at present, greatly to the credit of the very able gentleman at its head. When, however, in the course of time he retires, I venture to predict that no one else will be found with the same capacity for work and power of organisation; consequently confusion will arise, and the cost of production go up to something like that in the three other cases I have quoted. And the more this department undertakes now, the greater will be the fall then. For it stands to reason that one man cannot have time to design all the work produced by a great office of this nature, and if he has not time to do it himself it must be done by others. He is therefore at the mercy of his staff, and if at the mercy of his staff why not at the mercy of the outside architect? In the case of the London County Council, their architect is even called the *Superintending Architect*: his duty should therefore clearly be confined to *superintending* the work, not of a staff, for then it becomes his own work, but of those architects who work in London under his jurisdiction; and this principle applies equally to the architects of the Office of Works, the Admiralty and the War Office, and other large public and municipal offices, for all these gentlemen, if they attempt to design any work themselves, must neglect their staff, and if they leave it to their staff it must be good, bad, or indifferent, according to the staff, for one

man even cannot control a staff, the salaries of which at the Office of Works, for example, amount to something like £1400 per week, or perhaps as much as 99 per cent. of our practising architects pay to their staff during a whole year instead of in one week.

In these days of free trade and buying in the cheapest market, why should public offices be given preferential treatment? If there are a number of professional men of high standing prepared to accept a recognised scale of fees, why should these huge cormorants receive about half as much again as the ordinary rate? Hen-roosts, I know, are in demand just now, and I venture to suggest that, without robbing anyone at all, thousands of pounds might be saved annually from the unnecessary expenditure now involved in running these large architectural mills. The three which I have named, together spend annually in round figures about four and a half millions on building work at an average cost of about $9\frac{1}{2}$ per cent., or $4\frac{1}{2}$ per cent. more than the recognised payment for such work. This equals rather over £200,000 a year paid unnecessarily for the privilege of running these departments. It may be contended, however, that these departments are necessary, as there are a number of works like painting park-railings, mending broken windows, etc., that must be looked after; but a staff of surveyors could do this very well without mixing up architecture in the matter at all, and this I imagine is what was intended when the Office of Works was established.

My figures may not of course be quite correct—figures never are—and those who understand them better than I do may be able to put a much better complexion on them. I can only say that I have worked on the official published figures, and these as a rule are carefully and takingly prepared with a view to their being swallowed by the British taxpayer, and I hope I have not much overstated the case.

Again it must be only too obvious that a large Government Office is not a likely place for the production of various kinds of architectural work either well or cheaply, for the originating is generally done by understrappers, and sent up to the higher grades for approval or otherwise—a sort of Class of Design—and I have heard of as many as nine separate designs having been made for one building before such approval was obtained. In other professions does one man profess to be able to specialise in all subjects? Are there not landscape painters, and portrait painters, and some sculptors who work best in low relief and others in the round? Do not some lawyers go in for criminal work and others for the Probate and Divorce? Are there not doctors who cut at our insides and others who cut our throats; and even with us, some architects do church-work and others domestic work; but these Public Offices, as far as I know, claim to be able to do everything from a palace to a prison, and no doubt they can, and equally well too!

I have already referred to the Ninth International Congress recently held at Rome, and to the resolution passed there respecting architectural work intended for the State and Municipal Bodies being entrusted to non-official architects only. A number of other resolutions were also passed, but perhaps the following are the most interesting, viz.:

(1) "That the right to use the title of Architect should be reserved to those who have obtained it as a result of a proper examination passed after an artistic, technical, and scientific education."

(2) "That the title of Architect should be placed in the same rank as the title Master of Arts, Doctor of Medicine, etc."

These two resolutions are particularly interesting to us just now, for, as you know, this question has been before the Institute as long as I can remember, and it may help us to know what other architects think on the same subject. We, as you know, have been working towards these ends for some time past, and as a preliminary step have created a new class of members called Licentiates, nearly two thousand of whom have already joined our ranks. With the object, too, of organising the profession—with the sanction of Parliament—into a

strong, united, disciplined, and protected body, negotiations have been proceeding between this Institute and the Society of Architects, it being felt that two Kings in Brentford were hardly necessary, and that together we should be much more powerful than working independently. A number of meetings were held early in the year, as you are aware, and the general principles and a number of the details were satisfactorily agreed upon. Unfortunately—perhaps through my own fault—we got on rather faster than our legal advisers approved of, and we were brought up by finding that we had perhaps exceeded the powers we possess under our existing Charter and By-laws. This was rather a shock to some of us, but as we had gone so far, we felt that, in justice to ourselves and to the Society of Architects, we could not do otherwise than make good the mistakes made. Your Council has therefore been considering a revised Charter and By-laws which will enable the two bodies to unite under terms I think advantageous to both parties. This Charter and By-laws will, I hope, be very shortly laid before you, and I trust you will pass them, not, of course, without due consideration and discussion, but without forgetting what has already taken place. For many reasons it seems to me obvious that the two Societies should unite, but the reason that will perhaps appeal most to our only too human natures is the fact that by building up and increasing the power and influence of this Institute we are building up and increasing our individual power and influence. For the fact of belonging to a powerful body strengthens each of us, and makes us more confident when dealing with the many difficulties that abound in our multifarious duties.

If this Address should happen to be read in the provinces, I hope those interested in the good of the profession will endeavour to make as many of their confrères as possible join our ranks and so still further help to build up a really powerful and representative body. Another way in which our internal economy might be strengthened would be by a number of our Associates who have been Associates for years becoming Fellows. They are, in a number of cases, highly qualified in every way to become Fellows, and I hope they will consider the advisability of doing so.

It is a matter for congratulation, I think, that an architect has been associated with a sculptor in connection with the King Edward Memorial. The ideal method, no doubt, would be for one man to do the whole thing, but until our sculptors take a little more trouble to ground themselves in architectural matters, the only course I can see that will insure our monuments being satisfactory is to associate an architect with the sculptor : the custom hitherto too prevalent of leaving the sculptor to produce his own so-called architecture, or to get some compliant ghost to do it for him, is most unsatisfactory.

You will be glad to hear that there is now an immediate prospect of something in the nature of a British School being established in Rome, such school to embrace architecture, painting, sculpture, and archæology. Nothing, however, very definite has been settled, but there are prospects that, aided by private benefactors, helped by the Commissioners of the Exhibition of 1851, and backed up by the Royal Academy, the Royal Society of British Sculptors, and ourselves, a school will be shortly opened in Rome. Scholarships connected with it will be established, I anticipate, by this Institute with funds lately left us under the Jarvis bequest, and I think I am at liberty to say that the Commissioners of the Exhibition of 1851 will probably also give at least one scholarship each year to architecture, painting, and sculpture, so that with students who we hope may be able to attend this school, either privately or encouraged by the universities and schools about the country, a good school should be got together; and in such an appropriate centre for study as Rome, where most of the other nations have schools, we British subjects should be able to offer our students the means of completing their studies at a much higher level than has hitherto been the case. For it must be remembered that if we architects are to hold up our heads with any degree of success

we must have something in them, otherwise the public, which is very quick at finding out impostors, will go back to their old friend the jerry-builder, leaving us to pine in a well deserved obscurity.

VOTE OF THANKS TO THE PRESIDENT.

SIR ROBERT HUNTER, K.C.B., Solicitor to the Post Office, Chairman of the National Trust for Places of Historic Interest or Natural Beauty: Mr. President, ladies and gentlemen, I rise to perform a very pleasing task, that of proposing a vote of thanks to your President for the very able and humorous Address to which you have just listened. There is one prominent feature of that Address which you can hardly expect me unreservedly to admire at a moment's notice. While I noticed that the suggestion that the Government architectural work should be thrown open was received with very great approval by this meeting, for very obvious reasons, it would scarcely become a humble Civil Servant to rejoice over the discharge from their present offices of a large number of his colleagues. Certainly the President has given some very remarkable figures, which, I should think, are well worthy the notice of the Treasury, though probably that body will be able to give some explanations which might possibly put a different aspect upon those figures. There is one remark I would like to make upon that subject. I believe the great bulk of the work of the Surveyors of the Office of Works consists in supplying post offices. It would ill become me in this assembly to give any opinion upon the merits of the external appearance—the elevations—of our post offices; but I believe no one has yet suggested that the construction is not very sound and good; and I am sure that those buildings are very well adapted for the purposes for which they are designed.

With another of the suggestions of your President's Address, I find myself fully in accord. I am sure we shall be agreed it would be a very valuable thing if some controlling authority could control and supervise the execution of new so-called improvements in London. It always strikes me that the great difference between London and Paris is, that while in London we have many very fine buildings, splendid open spaces, and many other pieces of the town which are well worthy of admiration, there is yet a great absence of those broad effects which catch the eye at every turn in Paris, and which, certainly to me, give very much pleasure. In London, when we do get a broad effect of any kind, we do not seem able to keep it. There was one part of London which was constructed according to a uniform design: I mean the whole district from St. James's Park and the Duke of York's Monument, including Regent Street and Portland Place, up to Regent's Park and the surrounding houses. That was of one design; and although opinions may differ as to whether it represented a very high style of architecture, still it was harmonious and pleasing. Now, however, it is neither one thing nor the other. The Government Department which, I believe, owns most of the property in Regent Street has allowed the line of buildings to be broken into in a heterogeneous way from point to point, and there is no definite general line of architecture, and nothing which gratifies the eye in that respect. And, as the President has said, the Circus which used to exist at the bottom of Regent Street is now a space which, though it cannot be said to be "void," is certainly "without form." Of course, I can see, as anyone can see, that there are difficulties, in the City of London, in establishing and enforcing adequate control. The enormous commercial growth in London, and the extraordinary value which land in the centre of London attains, of course affords a perpetual incentive to put more buildings on a given site, and to get more money out of the land in that way. And that tendency must, in some measure, run counter to the desire to carry out a uniform harmonious plan. And there is also that intense feeling of individualism which has hitherto characterised this nation, and to which, to a large extent, we owe our present position in the civilised world; this attitude of mind resents any hard and fast control by any one Central Authority. I think much consideration must take place before any London Authority is established for such a control as the President suggested; but that some such control is desirable and wanted we shall all agree

But I think the sovereign remedy for all architectural ills is the growth of public opinion on the subject. Public opinion in favour of anything like architectural beauty on a large scale is a matter of very recent growth. Hitherto, when any design has been discussed, any scheme for laying out any new part of a city, or any question in which considerations of beauty and symmetry come in, the general attitude of the public mind towards them has been that it is very nice to have a pretty building, to have a nicely designed street, but if there is a question of money in the way, if it be a question of costing a little more to do, then all considerations of beauty must vanish, and considerations of finance must rule. I think that, at any rate, some inroad is being made on that feeling. There have been many signs of better things lately ; and amongst others, one may allude to the matter which has been spoken of by the President, the recent controversies over St. Paul's Bridge. In that case, at all events, whether the result may be altogether satisfactory or not, we have had this fact, that Parliament has directed opinion to be taken from the æsthetic and artistic point of view, and that has been carefully gone into.

Before I sit down, I venture to congratulate the architects of this country on the growing importance of their profession. It seems to me that of recent years it has been the general tendency for persons to take more interest in getting good houses designed for them, and even good offices, than was the case a short time ago. And not only is there a greater interest in the production of individual good buildings, but you have the whole subject of town planning, which is almost a growth of yesterday, attaining already very large proportions. When you have a Minister of the Crown opening a Town Planning Conference with a most enthusiastic address, and when you have an Act passed expressly with the view to promoting town planning, and when you see on all sides attempts being made to make the conditions of life a little better than we have been accustomed to in recent years, to create garden cities and garden suburbs, I feel sure you must all see that the scope of your profession is widening, and that you have a very great future before you. I have been told by professional friends that there has been comparatively little work amongst architects lately. One is very sorry to hear that, and it may be that there has been some check to building ; but I think that in the near future, the architect will be the right-hand man of every Local Authority, that he will be called in to design not only beautiful houses and buildings but to lay out and to plan every collection of human dwellings of any magnitude, and that he will co-operate with the engineer and with the medical officer of health, not only in securing the health of the community, but in providing cities and towns which will gladden the eye and add to the pleasures of life. Such papers as you have heard to-night—such spirited and suggestive papers—will greatly aid towards the progress of that movement, and I have great pleasure in proposing this vote of thanks to the President.

Mr. IRVING K. POND, President of the American Institute of Architects : Mr. President, ladies and gentlemen, fellow guests and members of the Council,—it was a great honour and pleasure for me, on behalf of the sister Institute and of myself, when I was asked to second the resolution of thanks for the admirable Address which your President has delivered this evening. It has given me so much to think of and so much to talk about, that, were I to follow my own desires, I should keep you here till too late, and it would not become me to outstrip your President. Therefore I shall confine myself to one or two of the main points. It is a pleasure to speak here, where there is community of speech as well as community of interest. We have been speaking in Rome, where we did not know whether we were understood or not, where we were pretty certain we were not understood—where even, if the words might be understood, the thought was very well concealed. Listening to this Address to-night brings in forcibly upon me that we, the mother country, and the child which I represent, have not only community of speech but community of thought and ideal ; that the same problems which your President has placed before you to-night confront us also ; that in a great many of our larger towns a division of interests and a number of taxing bodies make municipal development almost impossible. However, that is coming to a solution with us, as undoubtedly it will soon with you. The thing which appeals to me strongly in your President's Address bears more directly upon the establishment of the British School in Rome. As in the case of the bridges, there may be two points of view: the looking *at* the bridge, and the looking *from* the bridge. In the case also of the School at Rome

there are two points of view, and there may be a division of opinion among yourselves—I am possibly divided in my own mind—that there is the point of looking *at* the School, and the point of looking *from* the School. What is the School to bring you? It seems to me that you have your own traditions, and I cannot blame you for following them. I do blame my own compatriots, my own confrères, for being hide-bound, for being too closely wrapped up in tradition, for being still virtually in the swaddling-clothes which were wrapped about them as infants. It may be news to you, but we are more bound by tradition in America in our official architecture than you are here. What will Rome give you? You have culture; you do not have to go far to seek culture; you have Oxford and Cambridge, you have the British Museum, you have the National Gallery, you have easy access to the Continent, where you can pursue your travels and your travel studies. You have not far to go for culture. What will the School at Rome bring you? If you go to Rome to study classical traditions, to bring back forms and facts and try to apply them to your modern life, therein you have failed in your School at Rome. If you go to the School at Rome as you would go to the cloister, to allow it to mellow your tradition, the School at Rome has helped you. That is the use of the School in Rome—if you will take the advice of one who knows nothing about it! But the problem has been brought home to us. We also have a School at Rome, which was conceived by a former President of the American Institute of Architects, to which he gave his life and his fortune; and therefore, as a child of the Institute, it does not behove me to criticise it. But my advice to the student who seeks Rome is not to use Rome as a studio, but to use Rome as a ground for the expansion of his ideas. And recently the American School of Classical Studies has been incorporated with the Academy at Rome. Though this did not meet with the approval of some of the purely artistic geniuses connected therewith, it does meet with the approval of every man of broad culture, because what the student wants to determine in Rome is not that so many buildings were built at such an age, that so many blocks of stone of such a size were used, but rather what was the impelling motive which underlay all that building. And when a man has understood that, and brought back that principle and idea to his home, he has given that much more, and can give that much more to his community. The problems of official architecture affect us quite as they affect you. The American Institute of Architects was the father of a law. Through its persistent effort a law was enacted which, for a number of years, has been in operation, by which the principal work of the Government is given out in competition to the individual architect. Recently that law has been attacked by a new factor in the Government, one which seems to attack it in the interests of economy, so called. They make the figures show very beautifully for the departmental architecture. But we know that where the individual architect gets his 6 per cent. for this work, it is costing the Government, within its own department, something over 7½ per cent. Of course the Government figures do not show that; but that is the fact notwithstanding, and we have documents to demonstrate it. And we are combating now, in our own country, this inroad. This law, which has given and is giving to America a higher type of Government architecture than was produced under the departmental control, makes me hope that our law will not be overturned, and that your desired law may be enacted.

The vote of thanks, being put by Sir Robert Hunter, was carried by acclamation, and the President briefly responded.

REVIEWS.

FRENCH RENAISSANCE ARCHITECTURE.

The Architecture of the Renaissance in France. A History of the Evolution of the Arts of Building, Decoration, and Garden Design under Classical Influence, from 1495 to 1830. By W. H. Ward, M.A., A.R.I.B.A. 2 vols. 8o. Lond. 30s. net. [B. T. Batsford, 94 High Holborn.]

It is with some diffidence that I have complied with the request of the Editor of the JOURNAL *to furnish him with a notice of this book, since the Author himself insists that I am, in some remote fashion, responsible for its existence, and publicly acknowledges in too generous terms, the occasional advice I have been privileged to offer him. Well," no man," says Ben Jonson, " is so foolish but may give another good counsel sometimes," and it will be counted to me for righteousness by my fellow students to have aided, in however small a degree, in the accomplishment of such a work. Seven years have passed since Ward and I first discussed the need of a reasoned history of the Architecture of the Renaissance in France, and I persuaded him, modestly dubious of his own fitness, to undertake the task ; five years, since my convalescence from a long illness was cheered by the reading of the first pile of manuscript. The author has employed those years in adding to, revising and completing his work, and it now comes to me in a form so different and so complete in comparison with its first, that I find myself able to regard it with a certain critical detachment.*

Although the refined Neo-Classicism of the French schools of architecture has exercised, for some years past, a steadily increasing influence upon the work of British, and especially upon that of Scottish students, it has hitherto been difficult, both for students and professors, to obtain any clear picture of the historical development of French Renaissance architecture, save by individual research for which time and material were not always at their disposal. Such a picture was nevertheless essential to the proper understanding of the subject. The Renaissance work of France consists, not of a succession of styles, but of phases in a stylistic development, forming a national variant of the great artistic revival of which Italy was the birthplace.

The subject to be depicted was of great extent, comprising a period of some three and a half centuries, in which artists were both numerous and prolific ; but no one could be better equipped than Mr. Ward for the really tremendous task of analysing and classifying the mass of material—enormous even when typical buildings alone are considered—with which the land of France is sown throughout its length and breadth. His command not only of its language but of that which unlocks the stores of fact amassed by the patient German (and recorded in tomes of inconceivable dulness), and his scholarly habit of mind, give him a vantage possessed by very few architects in an enterprise which none but an architect might adventure with success.

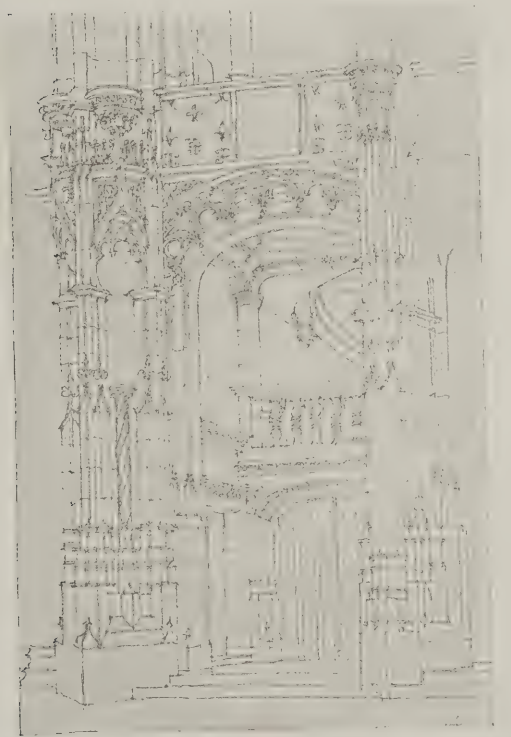
May I venture here to insist on the importance to every architect of a liberal general education before he begins his technical studies. To put it on the baldest commercial grounds, the time spent by a young man at a university is actually profitable to him, not merely in respect of general scholarship but of his subsequent architectural practice. He may, it is true, at 25 years of age find himself at a disadvantage professionally, when challenged by one of the same age who is three or four years ahead of him in technical training ; but at 30 he is already level, and thereafter his wider mental outlook, his better knowledge of comparative literary and historic values, and that flexibility of thought which comes from early intellectual gymnastics, give him a command of his art and its technics which is quite apart from, and can never be attained by, mere experience in practical design.

I take leave to assert that such a book as that before me could have been written only by an architect who had undergone what is generally called a " university training," and the remark applies equally to the brilliant work on the same subject by Mr. Reginald Blomfield which, in date of issue, treads upon the heels of that of Mr. Ward. The two books are singularly alike in the sane clarity of their authors' conclusions, while they differ as widely as may be in the handling of their premises.

My own lack of that early mental discipline I have just extolled must be my excuse for this digression ! I have ventured to emphasise the basic value of the Humanities because it is strikingly apparent in the construction of the book I am discussing. The merest crib-hunter cannot fail to remark the ordered logic with which the development of classicism—grafted, to adopt Mr. Ward's own figure, upon the exhausted stock of a native style, itself in turn to be revitalised by feeding the graft—is shown proceeding step by step with the march of contemporary history in France ; architecture inevitably reflecting in brick and stone the life and morals of its time, as it complies with their demands.

It is no part of my present purpose to attempt a digest of the two volumes, but I would direct the attention of my readers to some of the more important features of the work. First among these I place the very admirably written Preface and Introduction, which should be carefully read by every student. The Introduction is of especial merit and paints in miniature the whole course of the French neo-classic evolution. The general plan of the book is, I think, quite the best possible for the purposes of study and reference. The chapter divisions follow those of the quasi " styles," or periods of evolution, and each opens with a sketch of the general history of the epoch, prefaced

CAEN: HOTEL D'ECOVILLE: DOORWAY IN LOGGIA.
Measured and Drawn by Arthur Stratton.



CHATEAUDUN: STAIR TOWER.
From a Drawing by G. G. Wornum.

by a table of the reigning sovereigns, their queens,* and their English contemporaries. The path of the present-day student is indeed made straight for him; "qu'il en profite!"

The chronological plans too, are most useful—*e.g.* Blois (fig. 48), Fontainebleau in 1610 (fig. 61), Louvre and Tuileries in 1580 (fig. 158), Versailles (fig. 300)—and show the dates and authors of the various constructions, at a glance.

The illustrations generally are, of course, technically excellent—one expects no less of Mr. Batsford—and it is good to find the modern sketches and photographs supplemented by contemporary drawings of "vanished buildings and unexecuted projects." I quote from the Preface: "That this must generally be done by reproducing the drawings of by-gone generations of designers, so variously different from those of our own day, is in itself a gain, since the graphic method of presentment adopted by a du Cerceau or a Marot, a Neufforge or a Fontaine, is one element in his conception of design, and should be taken into consideration in the study and appreciation of the style in which he worked."

It is the privilege of a reviewer to air a grievance however small, and the book runs so smoothly that small irregularities jar the reader. I would plead for a uniform system of nomenclature in future editions. If "François" and "Henri" are to be rendered by their English equivalents of "Francis" and "Henry," why should Louis, Jean, and the rest be left in possession of their own names? Blois and Chambord are described as "castles" in some views, and as "châteaux" in others. The "Luxembourg Palace" is thus Anglicised, while to the Palais Bourbon and the Palais de Justice are given their proper designations. Servandoni, that *soi-disant* "Italian," appears as "Servandony," a form he would certainly have resented! There is, in fact, nothing but a bad tradition to justify the re-baptising of French folk and places by English names. The practice is confusing, in some cases actually misleading; the word "château," for instance, by no means always connotes what is known in England as a "castle"; it would often be more properly translated "hall" or "place."

That I should find no other fault on which to hang a sermon is in itself the best testimony I can give to the great excellence of Mr. Ward's work. The information contained in these two volumes is simply amazing, not only in its amount, but in its carefully sifted quality and consequent importance. I am left in wondering admiration of the author's unwearied research, of his masterly handling of its results, and of that remorseless reticence which has enabled him to compress them within 528 octavo pages of very readable print, while leaving space for a very liberal allowance of plans and views.

His reward is certain. Such a book will be for future generations as for the present the text-book on the French Renaissance; for though it may be supplemented by others of differing scope, or of more detailed information, it can never be superseded, never out of date.

JOHN W. SIMPSON [*F.*].

* *If these tables could have been supplemented by the names of the various royal mistresses, whose influence on the building schemes of their times was often greater than that of the queens, it would have enhanced their value and interest. I presume that considerations of space rendered this impracticable!—J. W. S.*

OLD LONDON HOUSES.

London Houses from 1660 *to* 1820. *A Consideration of their Architecture and Detail. By A. E. Richardson and C. Lovett Gill. Illustrated by Drawings and Photographs specially taken.* 8*o. Lond.* 1911. *Price* 15*s. net.* [*B. T. Batsford,* 94 *High Holborn, W.C.*]

The authors, photographer, and publisher are to be congratulated on this concise and handy volume, but turning over the pages from an architectural point of view one feels that there is a lack of measured drawings, and no sections of mouldings are given. It is remarkable how the photographer attempts to supersede these. Façade after façade in exact chronological sequence is given, but there are very few interiors. Exteriors can be seen by the many, but only few are privileged to view what they screen. It is the interiors of the British homes, especially in London, which have the greater charm and individuality.

The authors commence with the date of the Great Fire of London, give the conditions of rebuilding, and then divide the epoch under their review into three periods, which they call the Early or Formative period, 1666–1720, the Middle or Palladian period, 1720–1760, and the Refined or Formal Classic period, 1760–1820. They point out that the periods merged into each other, and that the date limits given show when fresh influences were brought to bear on architectural design.

The planning of the houses is next dealt with. Eight types are given; these appear to have been selected with great care, and show at a glance the progress made in town house planning; but a little more trouble might have been taken in their delineation. In Lindsey House, Colin Campbell shows the minor front staircase on the ground floor going down only; here it has the appearance of both going up and down with a solid newel between the flights; but this must be clearly wrong, as no provision is made for it on the first floor. In fig. 6, Dr. Heberden's house, the main staircase has somehow got omitted on the first floor, and no openings are even shown from the staircase hall except one leading to the service staircase; neither is it clear how this hall derives its light—most probably by a lantern overhead. By the plans of the second and third floors the main staircase hall appears to be floored over and no light

admitted to the centre of the house. If these omissions were on the plans from which the illustrations were taken, an inspection of the house should have been made to rectify them. Again, fig. 9, Buckingham House, the words "Ground Floor" should be transposed with "First Floor," and no doorway is shown in the semi-circular end of the hall connecting it with the entrance vestibule.

There can be no doubt that the authors bring weighty arguments to bear in assigning to the brothers Adam a pre-eminent place in the designing of the town house, and they claim that after a lapse of more than a century their houses can be converted into comfortable modern residences.

After giving only a short sketch of the interior of the town house they arrive at the main portion of the volume; this consists of four to a dozen lines of well chosen and highly condensed information and description of each of the ninety-eight photographs. The subjects brought under discussion must have entailed a considerable task in elimination, and then the photographer was confronted with the difficulty of choosing the best view to give prominence to the features desired by the authors. This has been done in nearly every case in a satisfactory manner, but exception might be taken to plate 41, which shows a rather repelling exterior of a house designed by Isaac Ware. They state that "the entrance hall is architecturally arranged with a screen of stone columns separating it from the staircase." Surely an illustration showing this would have been more interesting.

One of the best façades is on plate 66, which shows an excellent view of No. 20 St. James's Square. It is a fine example of design by Robert Adam. He has succeeded in making his order and fenestration one harmonious whole, clearly showing that this architect was a master in design. Not so Lindsey House (unfortunately not illustrated, being of too early a date, 1640), where the pilasters are subordinate to the fenestration, and at Nos. 57–8 Lincoln's Inn Fields (plate 34), where the fenestration is quite subordinate to the order.

Again, the view of the east side of Fitzroy Square, plate 73, demonstrates what can be done when an able architect is commissioned to design a long façade.

Finally, the authors mention the localities occupied by different classes of society and lucidly point out how much fine town planning was carried out in London by the great property-owners up to and during the Regency. These squares and crescents might be studied to great advantage by those who are interested in endeavouring to revive town planning and healthy homes.

Enough has been said to show that this book should be in the library of all architects and those interested in the art who have a reverence for the past and have courage to re-adapt fine old and trustworthy motives to modern requirements.

A. E. Henderson, F.S.A.

BUILDING IN LONDON.

Building in London: A Treatise on the Law and Practice affecting the Erection and Maintenance of Buildings in the Metropolis. By Horace Cubitt, A.R.I.B.A., P.A.S.I. With special chapters dealing respectively with The Cost of Building Work in and around London, by H. I. Leaning, F.S.I., and The Valuation, Rating, and Management of London Property, by Sidney A. Smith, F.S.I. La. 8o. Lond. 1911. *Price* 31*s.* 6*d. net.* [*Constable & Co., Ltd.*, 10 *Orange Street, Leicester Square, W.C.*]

It would be with much pleasure but some diffidence that the ordinary practitioner would read and review this book. On the one hand, we welcome a standard work, but, on the other, none but the expert can do adequate justice to Mr. Cubitt's three years' study and the fruits of his many years of exceptional experience. After reading through so complex a work, one wonders, on reflection, whether the laws of the Medes and Persians, which altered not, were but another phase of the unchanging East; for certainly our own ordinances are not only in a state of flux, but, if not being amended by our legislators from time to time, are pretty sure of being re-read in the process of illumination they receive at the Courts.

The law as regards the liability of the architect having been read of late to his disadvantage, he is alive to the advent of a work such as that before us to help him over his difficulties. The path of the person building in London is, as the author himself remarks, truly beset with difficulties, and when he realises that he is dealing with forty Acts, a number of by-laws and regulations, and, further, when he gets into touch with the L.C.C., the Superintending Architect, the District Surveyor, the Borough Surveyor, the Tribunal of Appeal, not to mention adjoining owners and their satellites, the said person will doubtless cordially agree with Mr. Cubitt.

The work is primarily written for the Londoner, though it has two special chapters, the one on the cost of building work, and the other on valuation, development, and rating, which are of wider interest; this 800-page volume, however, will stand or fall by whatever success it achieves in elucidating those same forty Acts and their accompanying by-laws and regulations. One certainly feels that Mr. Cubitt has made a splendid bid for success.

The work is arranged in six divisions following on broad lines those of the London Building Act of 1894. The author's excerpts are, however, collated in view of all the Acts and by-laws or legal decisions bearing upon any detail with which at the moment he may be particularly concerned, whether it be new streets, lines of building frontage, or some point in construction as to a bay-window or a party wall. Though of course finality will never be reached, the work is brought up to date. Even during the three years of its preparation two Capital Acts and three L.C.C. General Powers Acts (those variegated and hardy annuals) have become law.

We have always had with us the difficulty of expressing the many phases of the building trades into terms of the law, even probably in Roman times, but it is to the present day that we look for handbooks which shall restate the terms into those of the layman. For London, we have, amongst others, Mr. Dicksee's valuable work on the Building Acts, where they are entire but annotated, the handbook of the trained man. In the work under review Mr. Cubitt gives us a book for the unlearned inquirer treading with doubtful steps and hoping to find the spirit of both Act and by-law put into layman's English.

The author, from his service with both a provincial Council and the L.C.C., is led almost unconsciously to give us the view of the "insider," upon the administrative bodies of which he was a one-time unit; hence, it is gratifying to read, in view of the heartburning sometimes caused in the past by the decisions of the Tribunal of Appeal, that "the appellant may be sure his case will receive the fullest consideration by men who are themselves engaged in the control and direction of practical building work." Again, in the excellent summary which follows the useful chapter on the law as regards fire escape,—both, by the way, full of practical hints and observations,—the author drily remarks that "the counsel of perfection" is not always capable of being followed, and that one may hear of "demands that sometimes go beyond the limits of what can be reasonably required." His many years' experience, however, enables him to point out repeatedly facts not generally appreciated by applicants for "consents." In addition he supplies a chapter on how to apply to the Council, with much pertinent advice as to what to show and what to omit, in order to win that good opinion which is the first step towards gaining the desired consent. Few realise the very extended powers of the Council in the above, and here our author is at his best; his knowledge enables him repeatedly to point out facts not generally appreciated by applicants, and even to offer the restraining hand where, as would seem to be sometimes the case, the owner is not aware of his rights and would sign them away with a full consent. We are reminded that the right to build within the prescribed distance carries none but the ordinary limitation as to height; also that it is not necessary to apply for permission to erect balconies, gangways, staircases and such works, under ordinary circumstances and being "fire resisting." An important point, too, is as regards the owner's rights to the soil when, as is so frequently the case, he dedicates the surface to the public use and is thereon refused pavement-lights or cellar-flaps, and, no doubt, feels that undue advantage is being taken of him in the negotiations; here, as in many other cases, Mr. Cubitt recommends legal aid. As regards the Council, however, their latent powers of "consenting" themselves as it were almost out of the Act, in questions as to old buildings, is often overlooked by architects, and the author does well to remind us of Sections 207 and 211 of the '94 Act. The well-known thoroughness of the Council's staff comes to light in the chapter on special buildings, and it is interesting to note the conscientious way in which detail is attacked; the officers, we learn, are called upon "to investigate the strength of every single joint and connection," which they like to "check and re-check." Remembering the methods of the customs officer when similarly placed, we are only left in respectful admiration; however, the added sense of security for the architect will be doubtless fully appreciated.

Turning to the work itself, the type is bold and well selected, and though the author apologises for not using marginal headings, his alternative, viz. running them into the text in bolder type, is one of the pleasing features of the book. A more striking feature, however, is the use of the margin for continual cross-reference to the "letter" of the Acts which come at the end of the work in chronological order. This is of the greatest value in following the author in his rendering as a layman of the "spirit" of the Acts.

Of the divisions and chapters, all are good, but praise is especially due for chapter 6, which deals with the important items of frontage lines, open space about, and height of, buildings, &c., and is a welcome exposition of what to many is a difficult subject; also for chapter 2, with its valuable summary of the principal Acts, and the chapters on dangerous structures and rights of building and adjoining owners, both especially useful to the young practitioner, who is apt to feel that here the "greybeards" have the advantage of him. All the chapters are followed by a list of Law Cases relating to the points dealt with in them, and throughout occurs the author's remarkable gift of analytical arrangement, especially in the tables dealing with "open space," "diagonal line," &c. Such diagrams as appear are simple and clear—one could, by the way, wish for more of them. In one of the chapters a good summary and analysis is given of the many regulations *re* fireplaces and flues, with the suggestion that all draughtsmen should commit them to memory; and to those building in the City one can recommend the special chapter devoted to the requirements there met with.

In perusing the book, one is struck with the care with which all the points, small or otherwise, are dealt with and cross-referenced, and the value of many of the author's deductions cannot fail to be noted; his conclusion, for instance, that concrete walls are not referred to in the third rule of the first schedule is interesting and valuable; being so, such walls need be no greater in thickness than those of brick. We can, too, regret with him the significant omissions from the Acts of definitions for "building," "highway," "occu-

pied," &c., and the varying one for "owner". As regards the former, however, one would have expected Mr. Cubitt to give the definition originally in the '05 Act but subsequently struck out; and in reference to "occupied" it is somewhat a surprise to be told by him in discussing the scope of Section 7 of the '05 Act that a church or assembly hall may still be exempt from the provision of means of escape, because not "occupied" by twenty persons! The definition of warehouse as against domestic building well illustrates the difficulties of our building law; but here our author leaves us where he found us, battling with its paradoxes. His sense of detachment is, however, always good, and the inconclusive points are discussed impartially. The pity is that there should still be so many of them, and that we are so frequently recommended to have recourse to legal advice. It is pleasant to find that in the case of one of his queries, "What is a single building?" and its associated party-wall question, we have, since Mr. Cubitt's book went to press, the important finding of Justices Phillimore and Banks upholding on appeal a County Court judgment of last March, and this settles at all events that a party wall below can become an external wall over.

The above only bears out the uncertainty previously referred to, and one can understand if Mr. Cubitt is sometimes a little bitter, as when he dubs a part of Section 73 (shop fronts) as being absurd. Lawyers in their wisdom omit the commas, with sometimes unfortunate results, and this doubtless accounts for the apparent discrepancy.

Turning for the moment to another part of the book, great stress is laid on "exemptions" as being of particular importance, and also upon the vexed question of fees to district surveyors in regard to this matter; as such works stand, the district surveyors' survey is practically an official certificate that they are exempt. His conception seems still to exist, especially amongst builders, as to these exempted or partially exempted buildings. It is pleasing, by the way, to notice the friendly reference to the District Surveyors, and the opinion that they are sufficiently reasonable in not asking more than the ordinary careful architect is wont to do.

Space will not permit of reference to the author's remarks as to by-laws and the dormant powers of the L.C.C. under Section 164 of the '09 and Section 22 and 23 of the '08 Acts. With regard to the latter, since he has not withheld his work from the press for the overdue by-laws on reinforced concrete, one may expect further delay ere they are published. The foregoing will duly appear, we may suppose, in Mr. Cubitt's second edition, say in two volumes, of a book destined to expand, and then he need not break the "oneness" of his work by an interpolated chapter on bending moments and radii of gyration; this would not jar upon us in a second volume, where, too, might appear excerpts from the leading "Cases," as also the two excellent divisions contributed, the one on the Cost of Building Work by Mr. H. I. Leaning, F.S.I., and the other on Valuation, &c., by Mr. S. A. Smith, F.S.I.

The volume is apparently very free from error; but the Index, which is good, one would like to see amplified and cross lettered; random examples occur in "Open Shed" under S only, though "Engine Shed" is under both E and S. Separation of buildings is found as "Certain buildings, separation of," under B. R.I.B.A. Notice Forms have no reference given to page 225; "definition of structure," page 541, should read, "definition of building." An index is after all the reader's first friend and cannot be too full.

The marginal figures also on page 239 should read 478 and not 477; and a reference to page 119 is suggested for page 223, twelve lines up.

If one may suppose a second edition, one would suggest, amongst the salient points left over for more extended reference, the law of architect, client, and builder, and the law as regards ancient lights; and such an edition might well contain, in two double pages, maps of London, one north and one south, giving the borough boundaries, the surveyors' districts, and the adjoining urban District Councils (whose by-laws the while might well be included in the volume).

In conclusion one sees many legal curios, and on perusal of the work queries cross the mind upon which further comment would be acceptable; probably the author feels the same, but to give only one, viz. page 105, the builder of a staging within a building is not required to give notice, but on page 147 a licence would appear to be required and notice given, and Section 84 seems to bear this out also.

If we are apt to judge building law in London harshly, and to feel ourselves over-"by-lawed," we must remember that the provinces have little but the common law to which in difficulty recourse must be had, with, as Mr. Cubitt remarks, all its uncertainty and expense.

E. Alex^{R}. Young [*A.*].

CALCULATION OF COLUMNS.

Calculation of Columns: A Practical Application of the Theory. By Theodor Nielsen. 8o. Lond. 1911. *Price 4s. 6d. net.* [*E. & F. N. Spon, Ltd., 57 Haymarket.*]

As stated in the preface, the object of this small book is "to show the results of the researches of Professor Ostenfeld, of Copenhagen, the application of which affords rapid means of arriving at a reliable cross section of a mild steel column, and in general the strength of any column."

The results of these researches are given at the end of the book in a series of tables showing the breaking load per unit area on centrally loaded

columns corresponding to various values of "$\frac{l}{r}$" (free length divided by radius of gyration) for mild steel, wrought iron, cast iron and European pine, as worked out by the author from Professor Ostenfeld's formulæ. The values given in these tables compare fairly closely with those in general use, and being the results of a very recent series of exhaustive tests may safely be taken as accurate for ordinary work. It should be noted that the author recommends that those values corresponding to "$\frac{l}{r}$" above 125 are beyond what is desirable in practice. For factors of safety for ordinary work he gives 4 for steel and wrought iron, 8 to 10 for cast iron, and 5 to 8 for wood.

At the beginning of the book is given a short table for deducing the free length of a column from the actual length according to various fixings of the ends. A simple and ready method of obtaining the sectional area of a column when the length and load are known is given from Professor Ostenfeld's formula

$$A = A_1 + \frac{zl^2}{30{,}000}$$

where A is the sectional area required

$$A_1 = \frac{\text{load}}{\text{working stress}}$$

l = free length in inches

and z is a constant varying according to the kind of section used. A table of various values for "z" is given for all the types of sections in general use.

Tables are also to be found in the book for determining the radii of gyration of hollow round columns, and of various German steel sections, which apparently are not given in the makers' catalogues as is the case in England.

The book appears very free from errors; a noticeable one, however, occurs in the last line of page 1, "$l = 2$ L."

DIGBY L. SOLOMON, B.Sc. [*A.*].

REINFORCED CONCRETE.

The Practical Design of Reinforced Concrete Beams and Columns. By W. Noble Twelvetrees. 8o. 1911. *Price* 6*s.* [*Whittaker & Co. London and New York.*]

In this work, a subject much to the fore has been treated almost exhaustively for purposes of the practical designer or the student. More than one-half of the volume under notice is devoted to beams of reinforced concrete. The first chapter deals with bending moments and stresses, the four ensuing chapters with horizontal, and the sixth chapter with web reinforcement. The remaining departments of the subject are columns and struts, column bases, floor calculation, permissible working stresses in concrete and steel, and, in a final chapter, materials and construction. An Appendix follows containing a note on the standardisation of formulæ, tables of notation, and sundry "labour-saving diagrams" useful in designing beams and columns.

Both formulæ and graphic methods are employed for ascertaining moments and stresses, and the work comprises numerous diagrams which serve to elucidate the explanations in the letterpress. The information conveyed in the concluding chapter on "Materials and Construction" is evidently the outcome of much practical experience, and should prove invaluable.

In dealing with the subject of permissible working stresses, Mr. Twelvetrees has some critical observations, *inter alia*, upon the conclusions reached by the Committee of this Institute and embodied in their original Report. He points out that in concrete of 1 : 2 : 4 proportions the Report apparently provided for no variation of working stress for compressive strengths varying between 2,400 lb. and 3,000 lb. per square inch. It may be remarked that the Committee's Second Report, issued since Mr. Twelvetrees' criticism, is more definite in providing that such concrete shall show a strength of 1,800 lb. at 28 days or 2,400 lb. at 90 days. Another point touched upon by the author is the lower working stress (500 lb.) provided by the Committee for concrete in columns than for concrete in beams (600 lb.); and this apparent anomaly has also been dealt with in the Second Report.

GEORGE H. BLAGROVE, *Licentiate.*

Inigo Jones's Sketch-book.

On the recommendation of the Literature Standing Committee the Council have purchased for the Library a facsimile copy of Inigo Jones's Sketch-book, 1614. This is one of a hundred copies which the sixth Duke of Devonshire, in the first half of last century, had reproduced by lithography from the original in his possession. On the flyleaf is inscribed, "Mr. Burton is requested by the Duke of Devonshire to accept this facsimile of Inigo Jones's Sketch-book, April 1836." The Mr. Burton referred to was Decimus Burton, and beneath the above is written: "Given, August 1881, to his dear old friend Professor T. L. Donaldson by Dec^{s} Burton."

Books Received.

English Ironwork of the Seventeenth and Eighteenth Centuries. By J. Starkie Gardner. With 88 collotype plates from photographs chiefly by Horace Dan, Architect, and upwards of 150 other illustrations. 4o. Lond. 1911. Price £2 2*s.* net. B. T. Batsford, 94 High Holborn.

International Fine Arts Exhibition, Rome (1911). British Section Catalogue. Issued by the Royal Commission. Board of Trade Exhibitions Branch, 30 Broadway, S.W.

Reinforced Concrete Construction: Elementary Course By M. T. Cantell (*Licentiate R.I.B.A.*). 65 illustrations. 8o. Lond. 1911. Price 4*s.* 6*d.* net. E. & F. N. Spon, Ltd., 57 Haymarket.

THE CHURCH OF ST. MARY, ASHWELL, HERTS.: ITS STRUCTURAL DEVELOPMENT.*

By Walter Millard [*A.*].

[Photo by Latchmore.

St. Mary's, Ashwell.

MY Paper is an attempt to account for, or at least to suggest an explanation of, the structural development of this building; it is not a detailed description of the interesting features and objects that the building comprises.

This edifice stands to-day a typical example of the English parish church arrested in its development by about the end of the fourteenth century. The local building effort—and this must have been a great effort for the time—which produced the body of the structure expended itself mainly within the fourteenth century, leaving for subsequent execution only the two porches, the enlargement of certain window-openings and some screen-work, &c., besides possibly the finish of the tower. I speak of its being an instance of arrested development, because, as we see, the nave has its aisles, but the chancel has thrown out no aisles of its own, and so, of course, has never needed to expand upwards into a clerestory, like the nave; whilst the nave aisles have retained their eastern windows, in the absence of chancel aisles or chapels. In fact, this church has not been one to go through the complete course of development that ended in producing the fully-expanded plan and design of our English parish church, such—for instance—as we find in St. Mary's, Hitchin, or St. Margaret's,

* Read at the church before the East Herts Archæological Society, Thursday, 31st August 1911.

Westminster, and in many another example, with side aisles produced right out to the extreme length so as to finish in a line with the east wall of the chancel.

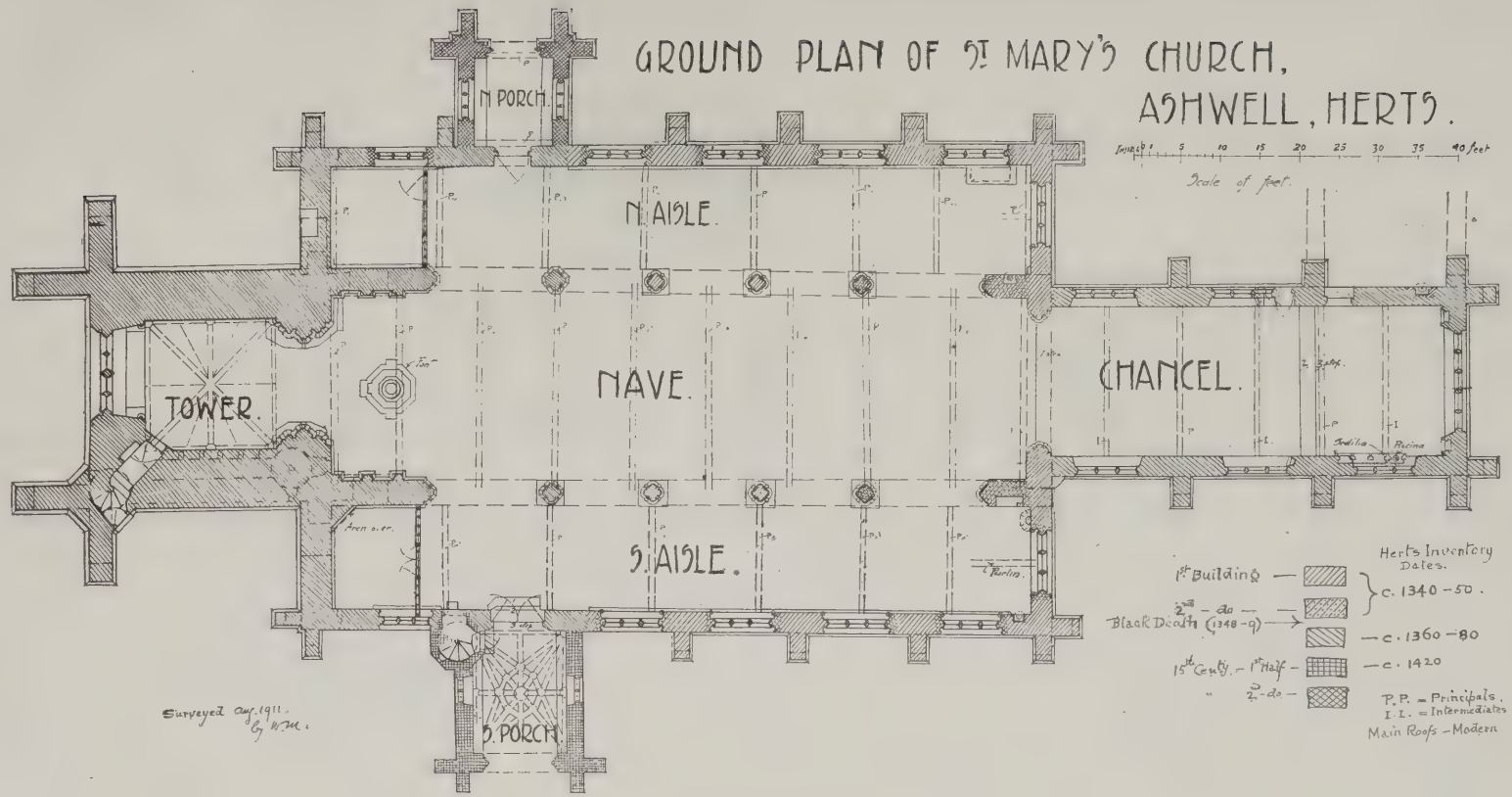
This work at Ashwell was an extensive building-undertaking, begun, as its design and detail shows, during the first half of the fourteenth century, *i.e.* before the Black Death of 1348-9, and then, after a check of perhaps ten years or so, carried through to completion in the course of the remaining half of the century. That is, the whole of the building-work that we view from the inside of the church—with quite trifling exceptions, and leaving out of account the modern main roofs—was conceived and executed within the course of the fourteenth century; and, moreover, it was done in consecutive sections. To trace the order in which these various sections of the work followed one another is the main object of my inquiry. Though built piecemeal, undoubtedly—as was usual in our old churches—the building as a whole appears to be the embodiment of one complete building-scheme pretty clearly thought out from its commencement; and, as I read this product of fourteenth-century building-enterprise, I conjecture it to be the carrying-out of a bold project to substitute a new church edifice for an earlier and doubtless smaller one then standing on this site: a project that would necessarily have to be carried out piecemeal, so that the daily use of their parish church was not prevented. It is true that no portion of such supposed earlier edifice can be pointed to with certainty as remaining in position above floor-level; so that its very existence may only be inferred, whilst its shape and size can be but guessed at. Yet, its influence as an edifice once standing on this site remains, I venture to believe, still affecting the disposition and shaping of the existing building. But at any rate, actual remains of an earlier structure are visible in plenty, out of their original position, worked into the walling of this church as "old material" by the fourteenth-century masons; as is revealed by an examination of the outer wall-faces and certain of the inner wall-faces of the building. Such examination shows that, after laying an outer base-course composed largely of stone coffins and their covers (disturbed no doubt by the necessary excavation for an enlarged church), they carried up the walling in random-work composed partly of flints interspersed in places with wrought stones of various shapes and sizes, occasionally showing the worked profile of a moulding. These wrought stones can only be the remnants of a former edifice; and they are not likely to have been transported here from elsewhere. To imagine Ashwell without a parish church until the fourteenth century would be absurd; to imagine an earlier parish church not on this site seems scarcely less than absurd.

The establishment of the existence of an earlier church on this site is a point of no slight import in the investigation of the growth of the present structure. It offers a clue by which perhaps some features in this edifice may be accounted for, features that call for explanation.

The fourteenth-century building, or rather rebuilding—as I prefer to call it—seems to have been begun by the erection of the three middle bays of the nave arcades; *i.e.* two piers and three arches on each side, north and south. The fact that the arch, cap, and base mouldings of these bays are identical on both north and south side points to the probability of these two pieces of arcade having been built simultaneously—the same templates being used—and not built as were those at Hitchin, for example, first one side and then the other, with consequent variation in detail. The mouldings of these bays of arcade at Ashwell indicate a date for their execution in the first half rather than the second half of the fourteenth century; which implies that the scheme of rebuilding was devised and its first section put into execution before the Black Death (1348–9). From what we are told of the effects of this visitation on the population of the country we can hardly suppose that the execution of the building-scheme, which was then in hand, could have proceeded all through the middle of the century without interruption. It is known that industry generally was dislocated for the time being, and by the date that building-work was resumed in many a case it is evident that new men came to it, with new ideas. The marvel is that here at Ashwell they were able to resume work so soon as they appear to have done and to have then carried it on to so successful a completion by about the end of the century, and on so extensive a scale. An important point to decide, so far as can be decided, in the story of this church is, what work in it can be assigned to a date before the Black Death and what dates from after the plague?

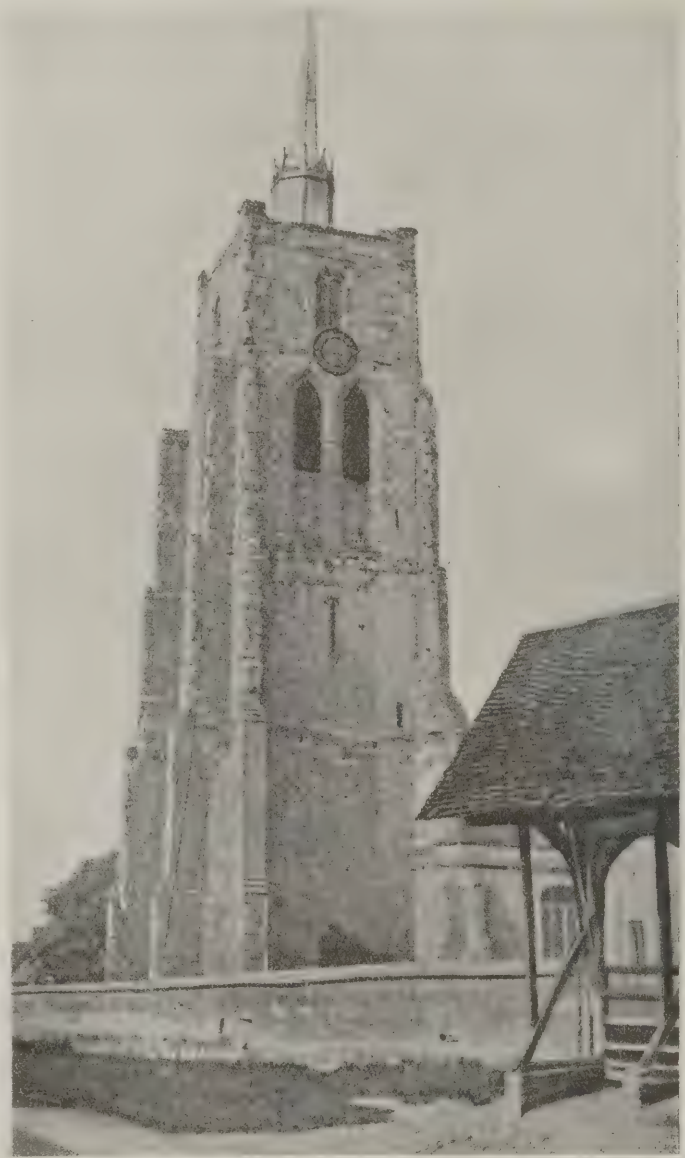
Seeing that the details of the chancel arch agree with those of these three first-built bays of the nave we may safely assign this arch also to their building-time, which the Royal Commission's Inventory of Herts * Monuments puts at from 1340–50. But, intervening between these two contemporary pieces of work, there comes one wider bay, with its pier and respond, on either side of the nave, of rather later date, as is clearly indicated by the altered detail of pier, cap, and base and a slight change in the arch moulds. These details here are a modified rendering of the design in the earlier bays; they look like the handiwork of another mason, who whilst distrusting his power to design something quite his own yet failed to adapt successfully the design of his predecessor. Why the building of this easternmost bay of the nave came to be deferred, and what actually intervened for a time between the earlier nave arches and the chancel

* *Royal Commission on Historical Monuments (England): an Inventory of the Historical Monuments in Hertfordshire.* A.D. MCMX.


GROUND PLAN OF ST MARY'S CHURCH,
ASHWELL, HERTS.
N. PORCH.
N. AISLE.
NAVE.
TOWER.
CHANCEL.
S. AISLE.
S. PORCH.
Scale of feet.
Surveyed Aug. 1911.
Herts Inventory Dates.
1st Building
2nd - do -
Black Death (1348-9)
c. 1340-50.
c. 1360-80
15th Cenly. - 1st Half -
c. 1420
2nd - do -
P.P. = Principals.
I.I. = Intermediates
Main Roofs - Modern

arch contemporary with them, is a material point in the decipherment of this building. Something, which has now vanished, seems to have remained standing here after the chancel arch was built. As to the actual date of this deferred bay it is not easy to be positive, but I should put it before rather than after the pestilence. The Inventory takes no note of its difference in detail from the adjoining bay.

The westernmost bay of the nave arcades, again wider and later in date than the three middle bays, and differing from them more distinctly than does the easternmost bay in detail, is less difficult to account for—as we shall see. It goes with the tower. The aisles, for the sake of which the arcades were designed, must have had their walls (including buttresses) set out along with the arcade corresponding to them; and for a certain height at least, if not for the full height, the two would be carried up together in all probability. Above the arcade the clerestory shows itself as contemporary work, for the two middle bays on the north side. The remaining clerestory follows the later arcade. The position of the chancel arch, square with the nave but out of centre with it, has to be accounted for. The chancel itself, a complete work of some quarter of a century later than the arch, according to the Royal Commission's Inventory, has been built to centre with this arch, though with its axis not quite at right angles to it. Yet one must suppose that the arch was designed, in its own day of building, to open into a then existing chancel; so here I think we have warrant for inferring an earlier chancel, and a chancel at that day intended to be retained. With it, of course, we infer an earlier chancel arch belonging to it, of which this fourteenth century one was surely an enlargement.



St. Mary's, Ashwell: West Tower and Lych Gate.

Reproduced from the Royal Commission's *Inventory of the Historical Monuments in Hertfordshire*, by permission of the Controller of H.M. Stationery Office.

An earlier nave, centering with the chancel arch and with this supposed earlier chancel, would be narrower than the present nave, if the N.E. respond pier represents the position of its north wall, as seems most likely. If there be anything of the earlier church still in position above ground I should expect to find a portion of it in the heart of this N.E. pier. According to this theory the required widening of the nave would have been obtained on the south side, thus accounting for the non-centering of the chancel-arch. An upright joint on the exterior apparently marks the S.E. angle of the narrower nave.

What I have to offer as a working-hypothesis, to explain the sequence of the various parts as they came into the existing arrangement of the building, is something as follows. Supposing an earlier and smaller church, with its chancel, on this site, in which it would be imperative to maintain the daily

service ; when a time came to enlarge the accommodation of their parish church they might still hope to get along with the chancel they had, small though it might be, if only the rest of the building were expanded. But to go straightway and pull down their entire nave, in order to rebuild it, would be most inconvenient ; whereas to keep up a portion of this nave towards the east, thrown open to the chancel by the building of a new arch as wide as could be got, might make a serviceable church to get on with. At the very same time the rebuilding of the nave further to the west, for so far as that nave extended in that direction, could be proceeded with, and with this would go its aisles, the eastern end-walls of which indeed would be needed for abutting the thrust of the new chancel arch. Presently when this area had been all enclosed and roofed, the still remaining eastern portion of the old nave, viz. that portion of it now occupied by the easternmost bay, could be dealt with by having the existing piers and arches built into its side walls ; and then the new high nave roof could be continued all over this remaining piece of early nave with its low roof, before this latter need be removed. Thus a new nave of four bays, with aisles, would have now become attached to the earlier chancel.

This is how I would try to account in outline for the work done down to the middle of the fourteenth century. Later on, in the second half of the century, the parish treated themselves, from 1360–80, as the Royal Commission's Inventory tells us, to a rebuilt chancel, almost certainly an extended one, in respect of length at least. To the north of its easternmost bay there lay what the Inventory calls—a vestry, since destroyed. It seems to have been regarded hitherto as a chantry chapel. A piscina in what was the southern wall-face of this building appears to have been moved from elsewhere and inserted here, its detail marking it as of earlier date than the chancel.

In this same half-century was carried through a great work of extension at the western end of the church, comprising a noble tower, which evidently was begun clear of the then-existing nave, to avoid disturbance in the church, and only joined-up to this latter when the work had risen above roof-level. The junction was effected by the westernmost arched bay, before alluded to. With this last would go its corresponding aisle-extensions, produced westwards as we see, and including the north and south doors to the church. A west door may have served till then. Important as these eastward and westward extensions of the church were as pieces of building-work, each in its way, they are nevertheless, in a sense, really of minor consequence in the history of the building compared with certain of the earlier modifications in the structure that I have been endeavouring to make out the course of. For, these great extensions, at the extremities, did not affect any subsequent development of this church-fabric. They formed the concluding chapters of the story, and were not turning-points in it ; no sequel hangs to them.

In the course of my inquiry into the history of this building I may seem to have laid almost more stress upon the unseen than upon the visible work that we have to examine ; but, as the builders of this visible work must inevitably have been influenced and controlled in their design and setting-out by the already existing work on the site, now no longer to be seen in position, so we, in endeavouring to read and account for their design and arrangement, in trying to understand the structure, shall do well to bear in mind and to conjecture so far as we can, the conditions under which they must have contrived and done their work. What was here must have governed to some extent what we find here now, probably to a great extent. Hence my concern about the vanished work of the earlier days in the building's story.

I cannot conclude without one word more on the subject of the stately bell-tower. This masterpiece of design and construction deserves a notice all to itself, based on close, critical examination of the work. Its planning and whole conception proclaim it to be the work of no ordinary mason, and the work of no beginner. In the study of our old churches I like, when possible, to find parallel examples that can fairly be compared together and thus used to throw light upon one another. As a parallel to this tower I would select the tower of Baldock Church, a smaller though still important work, and one some years earlier in date. It is but a fancy—to imagine the designer of the Baldock tower proceeding, later in life, when his powers had matured, to work out more fully at Ashwell his ideas as to what a church bell-tower should be.

9 Conduit Street, London, W., 11*th Nov.* 1911.

CHRONICLE.

The Opening of the Session.

There was a good muster of Members and Licentiates at the Opening Meeting of the Session on the 6th inst. The Meeting was held in the West Gallery, which proved a convenient and effective substitute for the Great Gallery, seating easily over 160 persons, and being noticeably good acoustically. Past Presidents were represented in the persons of Sir Wm. Emerson, Sir Ernest George, R.A., and Mr. Thomas E. Collcutt. Among the Council guests were Mr. Irving Pond, President of the American Institute of Architects; Mr. Edward White, Chairman of the London County Council; Sir Laurence Gomme, Clerk of the London County Council; Sir Robert Hunter, Chairman of the National Trust for Places of Historic Interest; Mr. Bertram Mackennal, R.A.; Mr. Evelyn Shaw, Secretary of the Commissioners of the Exhibition of 1851; Mr. Lewis Hind, the well-known art critic, and Mr. A. B. Black, Vice-President of the South Australian Institute of Architects. The President's Address was frequently and warmly applauded; and since, the meeting has been largely and appreciatively quoted in the London and Provincial Press.

Preservation of Churches from Fire.

The following circular letter, drawn up under the direction of the Council, has been addressed from the Institute to all Archdeacons in the Provinces of Canterbury and York and to the Church Authorities in Scotland and Ireland :—

4th November 1911.

Sir,—The frequent occurrence of disastrous fires by which churches and other buildings of historic and architectural interest have been entirely destroyed or seriously damaged has led the Council of the Royal Institute of British Architects to give special consideration to the means to be taken to preserve such buildings from the risk of similar disaster.

The Council urge upon all authorities who have charge of ancient buildings the necessity of every system of heating apparatus with the flues connected therewith being periodically examined under competent advice, and any necessary steps at once taken to put them in substantial repair. They also wish to impress upon authorities the necessity of all new installations, either of heating apparatus or of electric light, being carried out under thoroughly competent supervision, and of a certificate being obtained that the work is properly completed, and that the safety of the building has been adequately provided for.

The Council also suggest that all fire insurance policies should be re-considered and brought up to date and made to cover specifically stained glass, organs, fittings, and furniture. In many cases it has been found, when fires have occurred resulting in serious damage to buildings, that the amount of the insurance has been entirely inadequate for proper re-instatement.—Faithfully yours,

Ian MacAlister, *Secretary R.I.B.A.*

The Control of Advertisement Hoardings.

The devices employed by advertisers for disfiguring the natural beauties of our countryside and the amenities of public thoroughfares are ever on the increase, and the Council of the Institute have had for some time under consideration the question of the control of these objectionable forms of advertising. As Mr. Richardson Evans observed in his admirable Paper, "The Restraint of Advertising," read at the Town Planning Conference last year, "What is in question is the limitation of the right of individuals to play for their own purposes and at their own discretion upon the eyes of their fellows." Some months ago, the Council were approached by the New Malden District Council and asked to support a movement having for its object the amendment of the Advertisements Regulation Act 1907 so as to extend the powers under the Act to all Local Authorities. The Malden Council, moved to action by the complaints of ratepayers against the increasing erections of advertisement hoardings, to the great detriment of property in the neighbourhood, had passed the following comprehensive resolution :—

That in view of the ever-increasing number of public hoardings and similar structures used for the purpose of advertising, this Council desires to call the attention of the Local Government Board to the disadvantages and limitations of the Advertisements Regulation Act, 1907, as follows :—

(1) The disfigurement of towns and districts in populous and residential centres;

(2) Decrease in rateable value where property prejudiced;

(3) The reduction in rentals of good class residential property;

(4) The disadvantages of the limitations under Section 2 of the said Act, setting aside the objects and purposes of a town planning scheme under the Housing, Town Planning &c. Act, 1909;

(5) The system adopted by certain owners of reserving and applying strips of land adjoining streets, footpaths, railway embankments, and gable ends of property where exposed to public view, much to the detriment of the area;

and therefore do consider it desirable that steps be taken to secure an amendment of the Advertisements Regulation Act 1907, with due regard to the following:—

(*a*) For the powers under the Act being extended to all local authorities, irrespective of population;

(*b*) That the Act should be so amended as to closely follow the objects and purposes of the Housing, Town Planning &c. Act, 1909, which provides that local authorities shall allocate "special districts for special purposes." (N.B.—This would mean that advertisement hoardings would be more strictly regulated, restricted, or prevented in certain places in any town or district where such erections would affect injuriously not only the amenities of a public park or pleasure promenade, or even the landscape, but the amenities of the entire district);

(*c*) That in the interest of public safety and protection, no public hoarding should be erected on any land fronting any street in a town or district, except at a distance from the said street equal to the height thereof.

That a copy of this resolution be forwarded to the National Urban District Councils Association, Thames Councils Association, and to all local authorities throughout the country, with a view to representations being made to the Local Government Board hereon.

The Malden Council forwarded this resolution to the Local Government Board, with the request that, if the recommendations were considered practicable, the Board would determine whether structures of this character could be regulated, restricted, or prevented under the Town Planning Act of 1909. If not, they urged that a strong attempt should be made to secure powers; otherwise, town planning would be very seriously prejudiced. The Board, in reply, gave it as their opinion that the matter could not be dealt with by a scheme under the Town Planning Act, and that any suggestion for the amendment of the Advertisements Regulation Act 1907 should be addressed to the Home Secretary.

Mr. Johnson, Clerk to the Malden Council, in publishing this correspondence,* points out the hardship upon Local Authorities in promoting a scheme under the Town Planning Act, that they should be powerless to arrest this advertisement abuse, which must be subject in all respects to the defective machinery provided by the Advertisements Regulation Act.

The Council have addressed a letter to the Malden Council assuring them that the Institute is in entire accord with their action and with the scope of their resolution. The matter has been referred to the Art Standing Committee, and the Malden Council have been asked to communicate for their information the proposals they advance for amending or securing larger powers under the Advertisements Regulation Act 1907.

* See *Municipal Journal*, 29th April 1911.

Schemes under the Town Planning Act.

Under the instructions of the President of the Local Government Board a "White Paper" is now being prepared for presentation to Parliament showing the extent to which municipal authorities have taken advantage of the Act, or are considering the advisability of doing so. It is said that the majority of municipal councils, with a rapidly growing population to provide for, are waiting to see the results of the action taken by the bolder minority before taking any steps themselves. If it be represented to the Local Government Board that in any locality the Act should be and is not being adopted, the Board may, after a public inquiry, order the local authority to submit a scheme. The Board, however, disclaims any intention to use, or even threaten to use, this power at the present early stage. It is understood that the Board desires to help with advice those who are moving for the adoption of the Act, and to apply any needed stimulus in the friendliest manner. This seems to be realised by the Local Authorities, and it is stated that representatives of about a hundred of them have visited Whitehall and consulted the Board's officials on the subject. *The Times* has published the following particulars of schemes in course of formulation throughout the country:—

THE OUTSKIRTS OF LONDON.

At Ruislip the local authority has obtained the Local Government Board's leave to submit a scheme for the planning of 5,906 acres. At Hayes action is likely to be taken in the near future. Greenford has asked Harrow to co-operate in a scheme, and Harrow is about to discuss a scheme of its own. Wembley has decided to take immediate steps. In Willesden the council and owners are negotiating schemes for all the vacant land left. In Finchley a scheme is being prepared for a district served by both the Great North Road and the Regent's Park Road. In Hendon preliminary plans have been got out. The Wood Green Council has taken up the question, and it is thought a scheme may be prepared for 500 acres. Walthamstow has a committee about to report.

The Southgate Urban District Council intends to ask authority for a scheme, dealing with the whole district of 3,597 acres. The council has already acquired 63 acres for a park, and surrounding it is an estate of 240 acres which will be laid out on town-planning lines as agreed with the owners as part of the purchase consideration. The Middlesex County Council has decided to contribute £5,625 towards the purchase by the Southgate District Council of 90 acres of land at Winchmore Hill for the purpose of a public park.

Hanwell has just applied for leave to prepare an extensive scheme. In Histon and Isleworth a scheme is being prepared, and will probably include a large part of the Duke of Northumberland's and Lord Jersey's estates. At Twickenham a scheme for 1,880 acres has been approved by owners, and conferences have been held to secure co-operation with Richmond. The preservation of the view from Richmond Hill is one of the objects. The Ham Council has decided to start a scheme of its own if Twickenham's scheme includes a bridge over the Thames near Eel-pie Island, such a bridge being strongly objected to. The Esher and Dittons Council has a committee at work, and important

results are expected. The Maldens and Coombe Council has scheduled the whole of its unbuilt-on area. In Surbiton similar action is foreshadowed. Carshalton thinks of planning 2,500 acres, and successful conferences have been held with Croydon, Sutton and Epsom, a good main road between Croydon and Epsom being badly needed. In Croydon rural district a scheme has been formed for 1,474 acres in Morden and 300 in Mitcham; and Merton is working out a scheme which would include a large part of Morden if amalgamation of the two were allowed.

THE MIDLANDS.

Birmingham has obtained leave to prepare two schemes, for 2,320 acres in the south-west, chiefly in Quinton and Harborne, and 1,442 acres in the east; and a third scheme is expected for Erdington, beyond Aston. Oldbury, adjoining Birmingham, scheduled 1,898 acres in Warley, but the Board sanctioned only 1,791, considering the rest needless. North Bromsgrove has got similar leave, its scheme covering 554 acres just outside Birmingham.

Chesterfield, Derbyshire's coal centre, has reached the same stage, and its scheme is extensive.

THE NORTH AND NORTH-WEST.

Sheffield is scheduling 4,209 acres, and hopes to begin with about 1,220 in the west, south-west, and north. In Huddersfield a scheme has been practically adopted by a council committee. In Halifax Mr. Whitley, M.P., is giving prizes for the best town-planning schemes by local architects. In Hull the City Engineer's plan covers 670 acres of the north-east district.

In Liverpool it is proposed to schedule 88 acres in the south-east, near the new garden suburb. In Manchester the committee has proposed a scheme for the northern and southern suburbs. Rochdale has received authority to prepare a scheme for 43 acres, and a much larger area is contemplated. Middleton's application has been rejected as out of form, but an amended proposal will no doubt be granted; the scheme covers 300 acres. Nelson has given notice of a scheme covering 83 acres. The Barrow-in-Furness Corporation has adopted three schemes, the acreage being 1,780.

Stockport has a large scheme, providing for 2,300 acres in the south and 2,700 acres outside the borough. Part of the area is in Lancashire. Ellesmere Port, the new town on the Mersey, has given notice of a plan including Hooton Park and large sections of the Wirral and Chester rural districts.

The Wrexham Rural District Council has decided to adopt the Act, and will probably begin with Gresford, where a large colliery is being opened.

THE SOUTHERN COUNTIES.

Bournemouth has scheduled 202 acres, and leave to submit a scheme will probably be given this week. In Portsmouth all the land still vacant has been provisionally scheduled.

In Kent, Rochester's application has been rejected. A great part of the area mentioned—and the whole area was small—consisted of Crown lands, to which the Act does not apply.

Australian Federal City Competition.

In the July number of the JOURNAL (p. 642) the attention of members was drawn to the unsatisfactory nature of some of the conditions in the Australian Federal City Competition, and it was mentioned that a deputation from the Council of the Institute had laid their views upon the subject before the High Commissioner of the Australian Commonwealth in London, and that he had undertaken to bring the matter to the notice of his Government. It is understood that this has been done, but so far no notification of any change in the conditions has come to hand.

The Council of the Institute of Architects of New South Wales have issued a circular letter to their members in the following terms :—

September 1911.

SIR,—With reference to the competition for designs for the Federal City, as the Federal Government have refused to amend the conditions of this competition in the matter of the appointment of assessors, and the final decision is in the hands of the Minister alone, in spite of the recommendations made by the Institutes throughout the Commonwealth as well as the Royal Institute in London, my Council has decided to ask the members of this Institute not to take part in the competition unless the conditions are made more satisfactory.—I am, yours faithfully,

ARTHUR WM. ANDERSON, *Hon. Secretary.*

The Competitions Committee of the Royal Institute have had this matter under consideration, and the Council, acting on their recommendation, have published a notice requesting members not to take part in this competition [*see Supplement*].

Balliol Chapel.

The Master and Fellows of Balliol College have been tempted by a generous offer to pull down the present chapel and erect in its place an imitation of the building which was removed about the year 1856. Messrs. R. Norman Shaw, R.A., and Basil Champneys, in a letter to *The Times* protesting against the proposal, say: "There is no pretext of want of room or of ruinous conditions, but merely a desire to get rid of a building which offends the taste of the benefactor. By this wanton act of destruction Oxford will lose a valuable specimen of the art of the 19th century, the work of the greatest genius of the Victorian age. Whatever can be said against Butterfield, most architects agree in praising the dignity and originality of his work."

The Protection of Ancient Monuments.

In view of the sale of Tattershall Castle his Majesty's Office of Works have issued a letter to county councils calling attention to the provisions of the Ancient Monuments Protection Acts 1882 and 1900, providing for the guardianship of monuments of historic, traditional, or artistic interest. The letter states that the matter is of national importance, and the expense involved in guardianship would in some cases be more fittingly borne nationally than locally. The First Commissioner of Works hopes that county councils will not hesitate to

draw his attention to any monument worthy of protection.

Tattershall Castle.

It is announced that Tattershall Castle has been purchased by Lord Curzon, who intervened at the last moment to rescue the building from the risks of further vandalism or demolition. It is said that his lordship contemplates certain works of repair in order to prevent further dilapidation and to preserve the model of a fifteenth-century fortress-mansion. The rifled fireplaces are believed to be in the hands of a London dealer. It is hoped that, if they can be successfully repaired after their recent violent removal, some benefactor will follow up the action of Lord Curzon by restoring them to the Castle.

Indian Archæology: Retention of the Post of Director-General.

Lord Curzon, in the House of Lords last week, raised the question of the abolition of the office of Director-General of Archæology in India which the Government of India was reported to have in contemplation, and asked the Secretary of State for India what the policy of H.M.'s Government was with regard to the proposal. The Marquis of Crewe, in reply, stated that this was a point upon which the Government did not find themselves in agreement with the recommendation of the Government of India, and that a number of societies of great importance had approached the India Office to urge its retention. He was in general agreement with the view that it was impossible to regard archæology as in any sense a provincial subject, and he had decided that it was necessary to retain the Central Department for advice, for general supervision, and for the collection of information in connection with archæology.

The Rock Temples of Elephanta.

The Special Correspondent of *The Times* at Bombay sends the following message dated 7th November:—

The intervention of the Director-General of Archæology was never more urgently needed than in Bombay Harbour now. The King-Emperor is expected to visit the famous Rock Temples of Elephanta, and these have accordingly been taken in hand by a strong-mind d Department of Public Works. The chief glory of this deeply impressive relic is—or was—a central hall of many columns opening east and west on courts with lateral shrines. Every part of this—roof, columns, mural sculptures, and floor—was cut from the live rock in the hillside at least a thousand years ago. Time, ably seconded by Portuguese vandalism and the action of the British Government in using the hill above as an emplacement for a particularly heavy gun, had so impaired the temple as to make it insecure. Eight columns had fallen and others were greatly injured. These in recent years were simply, and quite properly, replaced or repaired.

It seems, however, that the æsthetic sense of the Works Department was offended by the contrasts of the result, and it has now been engaged in making the whole temple as good as new. Broken cornices and mouldings and worn or broken steps have been conscientiously filled in with Portland cement, and the beautiful stonework of the original columns, as well as the repaired ones or the entirely new ones, has disappeared beneath a khaki-coloured wash of cement, cowdung, and water. It is difficult now to distinguish old from new. Only one column in the side chapel remains untouched to show the delicate dark surface of the original stone. Hideous new yellow steps now rise from four sides to the central shrine. The splendid three-headed image of Shiva, which has been described as one of the finest examples of Indian sculpture, and other great mural reliefs are at present unviolated—but their turn may come. In any case, the sombre grandeur of the interior is already destroyed, and with it all the strangely impressive poetry of a monument which seemed almost as old as the solid rock from which it was carved. The temple is ruined.

The provincial archæological department apparently had some voice in the affair, but responsibility for the outrage lies chiefly with the Works Department. Had Westminster Abbey been whitewashed for the Coronation the vandalism could hardly have been more gross.

Egypt Exploration Fund: Excavation of the Osireion.

The chief work of the Egypt Exploration Fund during the coming season will be the continued excavation of the Osireion at Abydos, a great subterranean building connected with the Temple of Seti. Its excavation was begun in 1902–1903 by the Egyptian Research Account, the work being conducted by Miss Margaret Murray and Mrs. Petrie under the general supervision of Professor Petrie.

Miss Murray discovered that the building, at first thought to be the tomb of King Meneptah, the supposed Pharaoh of the Exodus, is in reality a *hypogæum*, or subterranean Temple, probably intended for the performance of the Mysteries of Osiris, identified with the dead King Meneptah, in the Underworld. Its stone walls are covered with well-cut sculpture and hieroglyphs, illustrating the "Book of the Gates," a portion of the Egyptian Scriptures which describes the supposed adventures of the soul in the "Underworld" after death, and certain charms and prayers to protect him (in this case Pharaoh Meneptah) against the assaults of devils. There are also representations of mythological subjects connected with the story of Osiris and the deities connected with his cult.

So far as excavated, the Osireion consists of a broad way descending to a great hall, out of which open a large chamber and a passage or second hall leading in the direction of the Temple of Seti. The manner of junction of the subterranean Osireion with the Seti Temple remains then to be discovered, and this is a most interesting task. It may clear up many obscure mythological references, besides making a considerable addition to our knowledge of Egyptian architecture. If new inscriptions are found, these may, like those already uncovered, add to our knowledge of the funerary ritual. On all accounts, therefore, the excavation of this, one of the most interesting buildings in Egypt, "this unique *hypogæum*," as Professor Petrie calls it, is

a work that should commend itself to the support of all who are interested in Biblical history, in the study of ancient religion, and in ancient knowledge of architecture and engineering.

The work will be carried out by Professor E. Naville, Ph.D., D.C.L., LL.D. [*Hon.Corr.M.*], assisted by Mr. T. E. Peet, M.A. Oxon., late Craven Fellow. Subscriptions and donations for this work are greatly needed and may be sent to Mr. H. A. Grueber, 37 Great Russell Street, W.C.

"Old London" at Whitechapel Art Gallery.

The autumn exhibition at the Whitechapel Art Gallery is this year devoted to "Old London," and the educational value of the exhibition is even more notable than usual. The upper gallery is filled with a collection of paintings of old London, including many by Hogarth, Canaletto, and Samuel Scott, which offer to the student of the history and topography of London a rare opportunity. Sadler's Wells and the Green Park in 1760, as depicted by Hogarth, two pictures of the old London Bridge before the destruction of its houses in 1757–58, by Samuel Scott, and David Turner's view of old Blackfriars Bridge and St. Paul's are examples of the many interesting things in this gallery, which presents an almost complete picture of the London of one, two, and three centuries ago. The exhibits in this gallery include a number of old prints and drawings lent from the collections of the R.I.B.A. The exhibition in the lower gallery relates to earlier historical periods. A selection of objects lent from the Guildhall Museum illustrates the life of the inhabitants of London in prehistoric, Roman, and later times, and there are other collections representing mediæval London and the Tudor and Stuart and later periods. Five large and beautifully constructed models, in illuminated cases, give a vivid idea of old Charing Cross in 1620, old London Bridge in 1630, old Cheapside in 1580, the entrance to the Fleet river, 1550, and old St. Paul's, 1560. Many maps, plans, and prints have been lent by the London County Council and other municipal bodies.

The British School at Athens.

At the festival dinner, celebrating the twenty-fifth anniversary of the British School at Athens last Tuesday, the Chairman, Mr. George A. Macmillan, referred to the successful excavations which had formed so important a part of the work of the School, and said that the individual work of the students was shown equally well by their remarkable bibliographical writings. Many of their old students now occupied important posts, and he instanced Mr. Marshall, the Director-General of Archæology in India. There were, he continued, four main objects for which the School was founded. The first was to promote the study of Greek archæology in all its branches, and he thought they could say that that had been amply fulfilled. Secondly, their object was to make it a school of classical study, and though the object was secondary, it was important, and its importance had been recognised by the Committee throughout, and by those who had taken advantage of the School. He was satisfied that the men who had spent their time at the School had found it of the utmost benefit to them in their after work. Thirdly, the School was also a centre from which information could be obtained, and where books could be consulted by British travellers in Greece; and there, again, he thought they had a very good record to show. Fourthly, the object was to form a library consisting of archæological and other suitable books, including maps, plans, and photographs, and that object had been continually kept in view, and had been attended with much success. The library was one of which the School might be proud, and which added enormously to its usefulness.

The Statutory Examinations: Mr. Lacy Ridge's Retirement from the Examining Body.

Mr. Lacy W. Ridge [*F.*], who has been a member of the Statutory Board of Examiners for twenty-seven years, for the last eleven years acting as Chairman, has recently retired from the position. The Council, at their Meeting of the 23rd October, passed a resolution expressing their thanks to Mr. Ridge for the invaluable services he has rendered to the Institute generally, and in particular in connection with the work of the Statutory Examinations.

Mr. Henderson's Restorations of the Temple of Diana at Ephesus.

Mr. Arthur E. Henderson, R.B.A., F.S.A., has presented to the Institute his two fine drawings illustrating his ideas for the restoration of the Temple of Artemis (Diana) at Ephesus—the Crœsus structure (7th century B.C.) and the Hellenistic (4th century B.C.). Mr. Henderson, it will be remembered, acted as architect to the excavations at Ephesus directed by Mr. D. G. Hogarth for the Trustees of the British Museum in 1904–05, and described the results of the work in an interesting Paper read before the Institute and published with numerous illustrations in the JOURNAL of the 5th December 1908. The drawings, which have been made to the same scale from a comparison of two different periods of Ionian architecture, are at present on exhibition, the Archaic Temple at the Aberdeen Art Society, and the Hellenistic at the Royal Society of British Artists. Reproductions of the drawings to a smaller scale appeared in *The Builder* for 24th November 1908 and 4th August 1911.

Architects' Benevolent Society.

The following letter has been addressed by the President, Mr. Leonard Stokes, to all practising architects in the United Kingdom :—

DEAR SIR,—In this year of many rejoicings and celebrations I should like to plead for your interest on behalf of a cause which deserves the support of every architect—I refer to the Architects' Benevolent Society, which has now been established for sixty-one years. During that period it has been the only organisation specially devoted to the needs of our poorer brethren who, through no fault of their own, have fallen on evil days. It has, further, in many hundreds of instances relieved the immediate distress of the widow or orphan left entirely unprovided for, and it has awarded pensions to the aged and deserving.

I regret to say, however, that although the philanthropic work of the Society must have general sympathy, the support which it has received has been far from adequate. At the present time the percentage of practising architects who contribute to its funds is very small. As President of the Society I have been able to observe how useful and necessary are its labours, and I shall welcome and gratefully acknowledge any contribution which you may send to me. It is particularly desired to increase the list of annual subscribers, so as to place the income of the Society on a firm financial basis. Hoping therefore to hear from you on the subject, I remain, yours very truly, LEONARD STOKES.

Modern French Sculpture.

At the next General Meeting of the Institute, to be held Monday 20th November, Mr. H. H. Statham [*F.*] will read a Paper on Modern French Sculpture, to be illustrated by over a hundred slides specially prepared for the occasion.

Honours and Appointments.

Sir GEORGE FRAMPTON, R.A. [*Hon. A.*], has been elected President of the Royal Society of British Sculptors.

Mr. FRANK WILLS [*F.*], a past President of the Bristol Society of Architects, has been elected Lord Mayor of Bristol.

Obituary.

WM. FORREST SALMON [*Fellow*, elected 1876], senior partner of the firm of Messrs. Salmon & Son & Gillespie [*FF.*], of Glasgow, died at his residence, "Rowantreehill," Kilmacolm, on the 7th October, aged 67. His father, the late Bailie James Salmon [*F.*], was born in Glasgow in 1805 and commenced practising as an architect in that city at an early age. W. F. Salmon was born in Glasgow in 1843, became a partner with his father, and was an original member of the Glasgow Institute of Architects, his father being the first President. W. F. Salmon was for some time in London in the office of Sir Gilbert Scott and executed some of the working drawings for Glasgow University. In association with his father, he carried out Woodilee Asylum for the Glasgow Parish Council which his firm won in competition, and laid out Dennistoun Estate, changing it from a collection of derelict mansions to a busy but well-planned suburb. His professional practice was an unusually varied one, schools, infirmaries, asylums, gaols, churches, workshops, mansions, hotels, institutions, and estate work. He delighted in Continental travel, especially in Italy, and in his first journey there he took with him Mr. Axel Haig, who, as a result, became an etcher and a life-long friend. His principal interest outside his profession was in the Glasgow School of Art, of which he was a governor for twenty years, and latterly for many years a Vice-Chairman and Chairman of the School Committee. He used every effort towards raising the status of the staff, and the high place which this school now has in this respect is largely due to his constant endeavours. His dearest friends were fellow-artists, Wm. Leiper, Wm. McTaggart, Scott Morton, Tom Hunt, Haig, and he was always most sympathetic towards the younger artists. Derwent Wood got his first commission from him. Johann Keller, Albert Hodge, G. G. Anderson, and many other young sculptors and painters owe much to his appreciative interest in their art. His own water-colours show an eye keenly alive to the spirit and beauty of nature. His work never became stereotyped, and several of the most up-to-date office buildings in Glasgow were planned by him. In his architectural designs there is shown the direct influence of Italian Renaissance, not the influence of books or of fashion, but a true recognition of the spirit which animated the masters of that school. He was President of the Glasgow Institute of Architects from 1892 to 1894, and served during that period as a member of the Council of the Royal Institute of British Architects.

JOHN DAVIDSON, *Licentiate*, of Dumfries, who died on 1st September, had been for over twenty-two years clerk of works to the Crichton Royal Institution. Besides extensive additions to the two original houses, he was responsible for the erection of the new buildings which include the Crichton Memorial Church (a fine building, of quite cathedral proportions, finished in 1897), the farm-steading with the large annexe for working patients, the Male and Female Hospitals, the artesian well, providing water for the whole establishment, and the electric light station, containing an installation which on its completion under Mr. Davidson's superintendence was pronounced by Professor Bottomley one of the finest for private purposes in the United Kingdom. He was the author of several Papers in the local Press on such subjects as "Church Architecture," "Baronial Castles of Scotland in the Middle Ages," "The Ecclesiastical Architecture of Great Britain from the Roman period to the Nineteenth Century," "Early Christian Art," "Gothic Architecture," and "Polychromatic Decoration." As a mark of respect for his memory the Directors of the Crichton Institution have re-

solved to place a memorial to him in the Crichton Church.

HARRY EDWARD EAST, *Licentiate*, whose death at the age of 34 is reported from Montreal, received his early training in the office of Mr. T. M. Cappon [*F.*], of Dundee. Afterwards he went to London and entered the Architects' Department of the London County Council. In a competition in connection with a housing scheme in Bermondsey involving an expenditure of between £40,000 and £50,000 the plans of Mr. East were successful. He was for a time in practice in London, but early this year went to Canada, where he latterly occupied an important post in the service of the Canadian Pacific Railway Company.

THE NINTH INTERNATIONAL CONGRESS OF ARCHITECTS, ROME, 1911.

The Ninth International Congress of Architects which was held in Rome from the 2nd to the 10th of October passed off very successfully, although the attendance was not up to the average. This latter circumstance was probably due to the fear of cholera, which was known to prevail in many parts of Italy. The Comité Permanent was strongly represented, the venerable President, M. Daumet, attending all its meetings. Notwithstanding the numerous fascinations of the Eternal City, the Congress meetings were well attended, and several subjects of considerable importance were discussed. The Exhibitions were all of great interest, though somewhat too scattered. In the Fine Arts Exhibition in the Valle Giulia, the English exhibit was by common consent far and away the best, and reflected the greatest credit on Sir Isidore Spielmann and his assistants who arranged it. Mention should be made of the wonderful model of Imperial Rome in the 4th century A.D., by M. P. Bigot, which was on view in one of the Halls of the Baths of Diocletian. Some of the visits were of quite exceptional interest, notably that to the Villa Albani, which Prince Torlonia very kindly threw open with its garden to the members of the Congress, who thus enjoyed the rare treat of seeing its priceless treasures. Another interesting visit was to the Villa Vascelli on the Janiculum, whence can be obtained one of the finest bird's-eye views of Rome. Tivoli and the Villa d'Este were also visited, and Dr. Ashby gave the members the benefit of his special knowledge of Hadrian's Villa on the spot. The Committee of Organisation entertained the Comité Permanent and the foreign Government delegates at dinner at the Grand Hotel, and Signor Cannizzaro, the Vice-President, was indefatigable in his endeavours to make the visit to Rome interesting and agreeable to all the members. The thanks of everyone are due to him and to the energetic Secretary, Signor Bisi. The final dinner was held at the Hôtel Excelsior, where the majority of the members, except a few who went on to Venice, separated in the hope of meeting again in 1914 at St. Petersburg, where, on the motion of the Comte de Suzor, the venue of the next Congress has been fixed by the Permanent Committee. The British members are indebted to Mr. John W. Simpson for the excellent arrangements made for their comfort on the journey to and during their stay at Rome.

JOHN SLATER [*F.*].

No official figures as to the number of subscribing members of the Congress are as yet available, but it is understood that members of all classes present did not exceed five hundred. Of the foreign sections the British headed the list with sixty-six members, the Government being represented by Sir Henry Tanner, C.B., I.S.O. [*F.*], and the Royal Institute by Mr. Leonard Stokes, *President R.I.B.A.* Mr. John Belcher, R.A., Vice-President of the Comité Permanent, and Mr. John W. Simpson, *Vice-President R.I.B.A.*, Secretary of the Comité Permanent. Other members of the Institute present included Messrs. J. T. Baillie [*F.*], F. S. Baker [*F.*], Lionel Barrett [*A.*], John Wm. Cockrill [*A.*], T. E. Collcutt [*F.*], James Davidson [*F.*], Colonel G. A. H. Dickson, M.V.O. [*F.*], F. E. Pearce Edwards [*F.*], Wm. Flockhart [*F.*], Henry L. Florence [*F.*], Sidney K. Greenslade [*A.*], Ewen Harper [*F.*], Arthur Hill [*F.*], James Jerman [*F.*], Llewellyn Kitchen [*F.*], G. E. Gordon Leith [*A.*], C. E. Mallows [*F.*], T. P. Marwick [*A.*], Percy Morris [*A.*], Albert E. Murray [*F.*], John Murray [*F.*], A. Southcombe Parker [*F.*], Harbottle Reed [*F.*], W. E. Riley [*F.*], representing the London County Council, R. D. Sandilands [*F.*], John Slater [*F.*], Henry Tanner [*F.*], Arnold Thornely [*F.*], Percy B. Tubbs [*F.*], A. Vassallo [*F.*], W. Fleming Wilkie [*F.*], John B. Wilson [*F.*], Thomas Charles Yates [*A.*], Alcide Chaussé and J. C. Prestwick, *Licentiates.*

A translation of the Programme of the Congress, with particulars of the various meetings, visits, receptions, and other functions, has already appeared in these pages [JOURNAL, Vol. xviii., pp. 688-691].

A translation of the official record of the Resolutions adopted by the Congress here follows:—

Subject I.—Reinforced Concrete: (1) Mode of Employment in Different Countries; (2) Its Application in Architecture from the Technical and Decorative Points of View.—The Congress agreed not to pass any resolution on this subject.

Subject II.—Rights and Duties of the Architect towards his Client.

First Resolution: The Congress resolves that the architect may not under any pretext whatsoever accept a fee from any but his employer.

Second Resolution: The Congress decides to refer

the further consideration of this question to the Permanent Committee.

Subject III.—Technical and Artistic Training; The Architect's Diploma; Exercise of the Profession outside the Architect's own country.—The Congress passed the following Resolutions:

(1) That the right to bear the title of Architect shall be reserved for those who have obtained such right as the result of a regular examination, passed after a course of artistic, technical, and scientific study.

(2) That the title of Architect shall be accorded the same rank as that of Master of Arts, Doctor of Science, Doctor of Medicine, &c.

(3) That the Schools of Architecture may be allowed to differ from one another, according to countries, while preserving the same general regulations.

(4) That admission to the Schools of Architecture shall be made conditional on the candidates' previous acquisition in other educational institutions of a general culture of equivalent standard to that required for the other liberal professions.

Subject IV.—Considerations as to Modern Architecture.—The Congress agreed not to put this subject to the vote.

Subject V.—The Execution of Architectural Works for the State or for other Public Bodies.

The Congress confirms the Resolution passed in London in 1906, and affirms that it is necessary to observe very carefully the distinction between the practice of the art of the architect and the work of the engineer.

The Congress further resolves

(1) That works of architecture undertaken for the State, Municipalities, or other public bodies should only be entrusted to qualified architects after competition, open or otherwise.

(2) That, with the object of ensuring that all monumental buildings shall satisfy every essential of art, the designs, which must be prepared by qualified architects, shall in every case be submitted for approval before execution to some such institution as the Académie des Beaux-Arts, or to committees composed mainly of architects.

Subject VI.—The Desirability of a Dictionary of Comparative Terms in Architecture.

The Congress recognises the utility of a dictionary of comparative terms in architecture, and resolves that the Permanent International Committee of Architects shall organise an International Commission for the purpose of continuing the work begun, and that it shall present the results of its labours at the next Congress.

The Congress is of opinion that the terms should be illustrated by drawings and diagrams in order that the details may be accurately defined.

Subject VII.—The Foreign Academies in Rome; Their History; Studies and Works of the Students; Influence exercised by these Schools in the countries they represent.—No resolution passed.

Additional Subject.—Artistic Copyright.

The Ninth International Congress of Architects assembled at Rome in 1911: Recalling on the one hand the resolutions passed during the last thirty-four years at the International Congresses of Architects and of Artistic Copyright, and likewise at the International Congresses of the International Literary and Artistic Association, and notably at those of Madrid 1904, London 1906, and Vienna 1908:

Recalling on the other hand the progress accomplished during the last thirty-four years in European legislation for the protection of architectural works of art, as, for instance, the Spanish Act of 1879, the French Act of 1902, the German Act of 1907, and the Convention of Berne in 1886, amended by the Act of Paris in 1895, and by the Berlin Conference of 1908:

Recalling, finally, the Resolution passed at the International Congress of Art held at Rome in April 1911, which proclaimed the legality of a uniform protection for all works of art, including architecture, during the lifetime of the author and for at least fifty years after his death:

Affirms:

(1) That architectural work must be protected in all its artistic aspects.

(2) That architectural designs, comprising designs of exteriors and interiors, the plans, sections, elevations, and decorative details, constitute the primary expression of the artist's conception and of the architectural work.

(3) That the building is only a reproduction, on the soil, of the architect's design.

The Congress also affirms the Resolution that the architectural work and all the designs of which it consists, either singly or as a whole, as well as the building and all other reproductions, shall be protected during the lifetime of the author and for a minimum period of fifty years after his death, in the same manner as all artistic work of painters, sculptors, and others.

Additional Resolutions.

The Congress respectfully invites the Government of Italy to take the initiative in forming an International Commission consisting of the representatives of countries subject to earthquakes, with the object:

(*a*) Of collecting all studies and works which have been or are being written not only concerning earthquakes, but also concerning the stability of buildings in those countries.

(*b*) Of elaborating general and local regulations for buildings to be erected in those countries.

(*c*) Of charging the foreign representatives of these countries who are present at this Congress to request their respective Governments to

establish seismic stations wherever these have not yet been provided.

(*d*) Of requesting that the seismic commissions may consist not only of learned geologists, but also of architects and engineers, so that by their labours these commissions may assist in providing a technical, economic, and artistic solution of the question of the stability of buildings in seismic countries.

At the Institute Council Meeting of the 23rd October allusion was made by the President to the services rendered by Mr. John W. Simpson in connection with the organisation of the English party that visited the Congress, and it was unanimously resolved that the Secretary be directed to express to Mr. Simpson the appreciation of the Council and their cordial thanks to him for his services in this regard.

CORRESPONDENCE.

Architects' Responsibilities.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Referring to Mr. Douglas Wood's letter in the September issue of the JOURNAL, until some legal remedy can be found for this really serious state of affairs, can you tell me whether there is any form of insurance against such risks as we must run, however careful and conscientious we may be ?

Perhaps some member of the profession can give a useful hint from his own experience.

W. CHAS. WAYMOUTH [*F.*].

The letters from Mr. Douglas Wood [*A.*] and others which have appeared in the JOURNAL under the above heading, with special reference to the case of the Leicester Guardians *v.* J. E. Trollope, are likely to cause a misapprehension, and I have been asked to make a few comments on the case.

In the first place, I do not understand the suggestion that architects can be held responsible *for all time*. The Statute of Limitations applies, I believe, to everybody, including architects, and by this the liabilities, whatever they may be, are limited to six years.

If I correctly understand Mr. Wood's letter, he appears to imply that the R.I.B.A. form of contract was used in the Leicester case. This is not so. In the R.I.B.A. form (clause 30) it is stated that "No certificate of the architect shall, of itself, be considered conclusive evidence as to the sufficiency of any work or materials to which it relates so as to relieve the contractor from his liability to execute the works in all respects in accordance with the terms, etc., of this agreement."

In the Leicester contract the corresponding clause expressly relieved the contractors from liability after the final certificate was given and after nine months from possession having been taken over. This in essence is the opposite to the R.I.B.A. clause 30, and I may add there is no reference in this clause 30 to "final certificate" at all.

The Judge's ruling was not a general one, but naturally dealt with the particular contract before him, and if employers elect to put in such a clause about the final certificate as that in the Leicester case certain consequences follow.

With the Institute's clause I know of nothing that will not "allow the employer to come down on the builder for defective workmanship or materials, even if discovered after the (last) certificate has been granted."

EDWIN T. HALL [*F.*].

The Revised Examination Syllabus.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—That changes must necessarily be made in the Examination Syllabus from time to time will be admitted by all, but that they should follow too rapidly upon one another causes a feeling of instability, especially if the alterations made are open to serious criticism. This is, I fear, the case with those which are now announced. In some respects they are most excellent, but in others they seem to me to be ill-conceived, and I trust that a few words of comment will be taken in the spirit in which they are offered ; just as Mr. Blomfield's references to the "crammer" in his introductory remarks upon the scheme, published in the last issue of the JOURNAL, are, of course, to be taken as having no reference to the private architectural tutor, much of whose life is spent in combating the desire of all the less competent of his pupils to "cram."

To begin with the Preliminary Examination, which it is not proposed to alter, it may be suggested that changes are more needed in that than in the later examinations. At present, it neither provides a test for the candidate having been given a gentleman's education (unfortunately he cannot be tested in gentlemanliness !), nor for his having any real capacity for architecture. It is such as a fairly well grounded lad from a public elementary school should pass with ease at the age of fifteen, and needs stiffening considerably, by demanding a higher standard of proficiency, especially in draftsmanship, and by adding the compulsion to take a second language, possibly with the alternative of a paper on higher algebra and trigonometry, much like that now put forward as one of the alternatives in the Intermediate. At present, there is too much encouragement for the hopelessly unfit to enter upon their initiatory training, and for parents to remove their sons from school at too early an age.

With regard to the Intermediate, the proposed changes possess both good and bad points, and unfortunately the bad predominate. The reason is

that too much is being attempted, there being a conflict between recognising that candidates may enter at nineteen, when they are quite beginners who need to be led on by easy stages, and desiring them to advance far and fast. Most of them are too young to be called upon to measure up complete buildings for their Testimonies of Study. The demand for such work will discourage. It is also questionable whether the old Gothic sheets should be done away with, a knowledge of the bases of Gothic work being quite as essential as a knowledge of the Orders; but it might well be made compulsory for these Gothic sheets to be measured, and for the rough sketches made on the spot to be submitted with them. The constructional sheets cry aloud for revision. Their preparation necessarily compels students to acquire a knowledge of antiquated, and in one respect obsolete, methods. No alteration in them is suggested in the Revised Syllabus!

In the Examination, the idea of setting certain alternative papers, thereby encouraging specialisation, is excellent, provided that the main object of an "Intermediate," or first technical examination, is not lost sight of—to compel all architectural neophytes to master the elements of their calling, as a child masters his alphabet and the multiplication table. But I cannot for the life of me see any reason for the suggested paper on mathematics and mechanics, after the Preliminary has been passed. In all my experience I have never known an architect as such to need algebra beyond quadratic equations, nor trigonometry at all; and so far as statics and dynamics are concerned, all that is essential is necessarily included under the heading of Stresses and Strains. If an alternative is required, it had far better consist in the elements of quantity surveying and the preparation and settlement of builders' accounts—subjects which are of the utmost importance to the great majority of practising architects, but education in which is now often wholly neglected, with lamentable after-results. Geometry and perspective should, I think, be compulsory subjects.

Of all the mistakes made in preparing the new syllabus, the most flagrant, it seems to me, is that of the Examining Board taking upon itself some of the functions of a teaching body by setting subjects for design from time to time, while the alternative machinery for their examination (either by the Council of one of the Allied Societies, or by a Committee of the Board of Education) is hopelessly unworkable, if any uniformity of standard is to be reached. It would be far better to leave the Testimonies of Study as they are, but to insist that the sheet of constructive masonry should be either measured or designed (not merely copied), and that the roof be in accordance with modern practice, reinforced concrete being permitted to be used. If any serious alteration be thought desirable, it might be suggested—as, in fact, it already has been by Mr. Purchon—that it should take the form of requiring more measured work than at present, instead of relegating measuring entirely to the "Intermediate"; but, to my thinking, it would be deterrent to add largely to the present demands.

It may possibly have escaped the notice of those who have drawn up the new syllabus that those students who take the "Intermediate" under the old conditions and the "Final" under the new, will not necessarily be compelled to do any measured work at all.

The idea of the studied thesis is most excellent, for it compels high specialisation in some one direction by every candidate, while insisting only upon moderate acquirements all round. All that is needed to meet all cases is to entitle the second alternative "Science *and Practice* as applied to Building," so as to put those who intend to devote themselves to the practical side of the profession, such as the conduct of arbitrations or the management of building estates, on an equality, as regards the possibility of qualifying for admission into the Institute, with their more artistic brethren.

Ending, as I commenced, with a reference to Mr. Blomfield's "Note" in the last issue of the JOURNAL, I may say that I disagree with him profoundly in one respect. After a very long and intimate experience of aspirant architects, I have come to the conclusion that their quality is steadily and rapidly rising, and that probably never, since the great days when English Gothic architecture was supreme in beauty above all the styles of building then in vogue, have there been more young architects who are artistic to their finger-tips (and students, too, in the best sense of the word) than there are to-day.—Yours faithfully,

G. A. T. MIDDLETON [*A.*].

Oxford Cathedral and the Civil War.

From FRANCIS BOND [*Hon.A.*]—

In collecting matter for a new edition of *English Cathedrals Illustrated*, the following information was sent me by Mr. William Francis, the senior verger of the cathedral. I give it in his own words:—"In Dean Liddell's time, I once had occasion to go up to the space 'tween the vaulting of the Choir and the lead roof in order that a London architect might examine how the stone pendants were keyed in. We went armed with tapers as there is only a very feeble light there. On striking a match we found to our dismay that there was a great deal of hay stored there, especially in the pockets of the vault; we had to exercise the greatest caution. I brought a sample down with me and took it to the Dean. He at first said it was impossible: he could not see the use of hay being there; then he suddenly remembered a tradition that in the time when Charles the First was shut up in Oxford, a great deal of hay was stored in Christ Church some-

where for the King's use. He asked Mr. Druce, the Oxford botanist, to give his opinion on it, and he said it was a coarse kind of hay which no longer grew in these days, and in all probability was a stock laid in by the freemen of Oxford from Port Meadow, for King Charles's use. The Dean had it all cleared away: but three sample bags were preserved as relics, one being given to the British Museum, one to the Oxford Museum, one to the Treasury, Christ Church. That is a nice little romance I hand on to you; only two people are living now that figured in it, Mr. Druce and myself."

MINUTES. I.

At the First General Meeting (Ordinary) of the Session 1911-12, held Monday, 6th November 1911, at 8.30 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 37 Fellows (including 16 members of the Council), 41 Associates (including 3 members of the Council), 2 Hon. Associates, 34 Licentiates, and several visitors: the Minutes of the General Meeting, held 26th June 1911, having been already published in the JOURNAL, were taken as read and signed as correct.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President—viz.: Leonard Keir Hett and Albert Turnbull, *Associates*; Francis John Garlick, Edward Ashby Smith, Albert Edgar Cockerell, Mansfield Price, William Sheen, Ashley Scarlett Killby, George Scott Miles, Harry Gordon, Henry Spencer Benison, William Edward Pinkerton, Edmund John Ward, Arthur Fred Collins Bentley, Thomas Henry Birchell Scott, Henry Holmes Dawson, Frederick John Rayner, William Henry Bailey, *Licentiates*.

The following candidates, being found eligible and qualified according to the Charter and By-laws, were nominated for election—viz.: As FELLOWS: Harry Barnes [*A.* 1894], West Hartlepool; Herbert William Bird [*A.* 1897], Hong Kong, China; Joseph Spain [*A.* 1895], Sunderland; Robert Douglas Wells [*A.* 1901]; Horace White [*A.* 1903]. As ASSOCIATES*: Maurice Spencer Rowe Adams [*S.* 1909]; Laurence Mortimer Angus [*S.* 1910]; Edward Ernest Barks [*Special Examination*]; Paget Logan Baxter [*Special Examination*]; Hubert Joseph Benians [*S.* 1908]; William Thomas Benslyn [*S.* 1905], Birmingham; Richard Henry Percy Bevis [*S.* 1906], Southsea; Arthur George Blackford [*S.* 1907]; Kenneth Stephen Broad [*S.* 1909]; Baldwin Brown [*S.* 1903], Bradford; Murray Brown [*S.* 1910]; John Edgar Bullock [*S.* 1907]; Leonard Harris Clarke [*S.* 1910], Harrogate; Joseph Charles Gladstone Davies [*S.* 1909], Morriston, Glamorgan; William Frederick Davies [*S.* 1907], Liverpool; Charles Davis [*Special Examination*]; Charles Alva Edeson [*Special Examination*], Derby; Arthur Frederic Evans [*S.* 1908], Liverpool; Leonard John Finning [*S.* 1907], Pinhoe, Exeter; Wilfred Thomas Garbutt [*S.* 1909], Bradford; Wilfred Stuart Gorringe [*S.* 1907], Seaford; Bernard Malcolm Goodwin [*S.* 1906]; Guy Donne Gordon Hake [*S.* 1909]; Charles Alfred Harding [*S.* 1911], Glasgow; Geoffrey Wyville Home [*S.* 1909]; Thomas Cecil Howitt [*S.* 1908], Nottingham; John Norman Keaseley [*S.* 1904]; Frank Wardel Knight [*S.* 1909]; Wilfrid Lawson [*S.* 1909], Newcastle-on-Tyne; Adrien Denis Leroy [*S.* 1909]; Philip Norman Logan [*S.* 1908], Bristol; Charles William Long [*S.* 1908]; Moritz Richard Martin [*S.* 1905]; Frederick Edward Mennie [*S.* 1907]; Harold Ian Merriman [*Special Examination*]; Alfred Hugh Mottram [*S.* 1910]; George Burgoyne Owen [*S.* 1909], Sydney, N.S.W.; Thomas Abel Parker [*S.* 1908], Cole, Lancs; John Wilson Paterson [*S.* 1909], Edinburgh; Ivor Mervyn Pritchard [*S.* 1909]; Hayward Lewis Samson [*S.* 1904]; Charles Malcolm Swannell [*S.* 1908]; Francis Harold Swindells [*S.* 1909]; Michael John Tapper [*S.* 1908]; Harold Thornton [*S.* 1905], Dewsbury; Arthur George Warnham Tickle [*S.* 1906]; Harry West [*S.* 1906]; Johannes Thorwaldson Westbye [*Special Examination*], Christiania, Norway; Arthur Eli Mitchell Whitehouse [*S.* 1907]; Norman Wigzell [*S.* 1908], Sunderland; Llewellyn Ebenezer Williams [*S.* 1909]; Allen Woodward Wilson [*S.* 1903], Peterborough; Cecil Reynolds Winter [*S.* 1907], Bournemouth; Harry Wormald [*S.* 1904], Wakefield; Christopher Wright [*S.* 1907]; Allan Murray Campbell Young [*S.* 1905]. As HON. ASSOCIATES: Walter Crane, R.W.S., Commendatore Royal Crown of Italy; John Hubert Marshall, M.A. (Cantab.), Companion of the Indian Empire, Director-General of Archæology in India, Simla, India. As LICENTIATES: Cyril Eyres Ainley, Manchester; John Arabian; Richard James Archibald, Middlesbrough; Charles William Bell, Sunderland; Noel Franklin Bellamy, St. Austell; Walter Herbert Bridges, Skegness; John Brown, Stranraer, N.B.; Bertie Cooper; Alfred Herbert Coyle, Baroda, India; George Henry Davies, Pontypridd; William Allan Dew, Hyde, Cheshire; Alexander Ellis Diack, Aberdeen; Cyril Hamilton Dyer, Bloemfontein; James Gardner Gamble, Belfast; Tom Grazebrook, Stourbridge; Charles Ingleby Greenhow, Newcastle; Charles Henry Grieg, Edinburgh; Watson Hall, Oudtshoorn, South Africa; Ernest William Hilton, Altrincham; Ledgar Holdsworth, Wakefield; George William Curzon Lane, York; Vincent Alexander Lawson, Stroud; Frederick George Ivall Legg; John Martin Lewis, Madras, India; James Lowson, Aberdeen; Donald Macdonald, Dingwall; John Francis McGahon, Dundalk; Herbert Alton Magoon, Alberta, Canada; Thomas Malvern, Cheltenham; William Thomas Margetts; Robert Thomas Miller; Bernard Cuddon Palmer, Lewes; Ernest Pawley; Peter Reid, Kirkcaldy; William H. Scott, Cardiff; Stanley Selwyn, Eastbourne; William George Shipwright; Henry Arthur Sisley, Manchester; Charles Bouton Smith; Charles H. Spark, Sydney, N.S.W.; Arthur William Stabler, Durham; Joseph Hunt Stanford, Toronto; Walter Steer, Brighton; Samuel Taylor, Burnley; Herbert Townley, Manchester; George James Morriss Viner; Frank Ward, Edmonton, Alberta; Joseph Dixon White, Bootham, York; Absalom Reade Wood, Burslem.

The President having delivered the OPENING ADDRESS of the Session, a vote of thanks, proposed by Sir Robert Hunter, C.B., and seconded by Mr. Irving K. Pond, President of the American Institute of Architects, was passed to him by acclamation.

The meeting separated at 9.30.

* All the applicants for Associateship passed the Qualifying Examination in June last.

Erratum, JOURNAL Supplement, 21st October.—In the List of Donations to the Library, p. 145, "The Petit Trianon, Versailles," should have been entered as presented by Mr. John Wilson, the joint author with Mr. Arnott.

RD arch.

Telegrams: "Ribazo London." P.O. Telephone: "434 Mayfair."

[*Supplement*]

JOURNAL
OF
THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

VOL. XIX. THIRD SERIES No. 1 11 NOV. 1911

Prospective Arrangements.

1911
Nov. 20.— 2. MODERN FRENCH SCULPTURE. By H. HEATHCOTE STATHAM [*F.*].
Dec. 4.— 3. BUSINESS MEETING.
Dec. 18.— 4. THE NEWER RESPONSIBILITIES OF ARCHITECTS. By THE PRACTICE STANDING COMMITTEE.
1912
Jan. 8.— 5. BUSINESS MEETING.
Jan. 22.— 6. COLOUR DECORATION. By SIR ALFRED EAST, A.R.A. [*H.A.*], AND EDGAR WOOD [*F.*]. AWARD OF PRIZES AND STUDENTSHIPS.
Feb. 5.— 7. PRESIDENT'S ADDRESS TO STUDENTS. PRESENTATION OF PRIZES.
Feb. 19.— 8. COLLEGIATE ARCHITECTURE. By EDWARD WARREN, F.S.A. [*F.*].
Mar. 4.— 9. BUSINESS MEETING. ELECTION OF ROYAL GOLD MEDALLIST.
Mar. 18.—10. THE ARCHITECTURE OF THE FRENCH RENAISSANCE. By W. H. WARD, M.A. Cantab. [*A.*].
Apr. 1.—11. MODERN METHODS OF CONSTRUCTION. By WM. DUNN [*F.*].
Apr. 22.—12. THE ROYAL INSTITUTE LIBRARY AND SOME OF ITS CONTENTS. By C. HARRISON TOWNSEND [*F.*].
May 6.—13. ANNUAL GENERAL MEETING.
May 20.—14. RECENT UNIVERSITY ARCHITECTURE IN THE UNITED STATES. By R. A. CRAM.
June 10.—15. BUSINESS MEETING.
June 24.—16. PRESENTATION OF THE ROYAL GOLD MEDAL, at 8.30.

Australian Federal Capital Competition.

Members and Licentiates of the Royal Institute of British Architects are requested not to take part in the above Competition.

By Order of the Council,
IAN MACALISTER, *Secretary.*

THE SECOND GENERAL MEETING (ORDINARY) of the Session 1911–1912 will be held Monday, 20th November 1911, when the Chair will be taken at 8 p.m. precisely, for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held Monday, 6th November; formally to admit members attending for the first time since their election, &c.

To read a Paper on the following subject:—

MODERN FRENCH SCULPTURE.

By H. HEATHCOTE STATHAM [*F.*].

The Paper will be illustrated by over 100 slides specially prepared for this occasion.

Election of Members, 4th December 1911.

An election of Candidates for Membership will take place at the Business Meeting of the 4th December, in accordance with the provisions of By-law 10, and a candidate will be declared elected if supported by a majority of Fellows and Associates present. The names and addresses of the Candidates (with the names of the respective proposers) found by the Council to be eligible and qualified for membership according to the Charter and By-laws, and recommended by them for election, are appended:

As FELLOWS (5).

BARNES: Harry [*A.* 1894]; Bank Chambers, West Hartlepool, and 4 Summerhill Grove, Newcastle-on-Tyne.
Proposed by Henry C. Charlewood [*F.*], W. Milburn [*F.*], Geo. T. Brown [*F.*].

BIRD: Herbert William [*A.* 1897]; Hong Kong, China.
Proposed by Geo. H. Fellowes Prynne [*F.*], Rowland Plumbe [*F.*], Edward A. Ram [*F.*].

SPAIN: Joseph [*A.* 1895]; 51 Fawcett Street; and The Nook, East Boldon, Sunderland.
Proposed by Henry C. Charlewood [*F.*], W. Milburn [*F.*], Geo. T. Brown [*F.*].

WELLS: Robert Douglas [*A.* 1901]; 5 Bedford Row, W.C.; and 171 Queen's Gate, S.W.
Proposed by Alexander Graham [*F.*], Harry Redfern [*F.*], Sir Ernest George [*F.*].

WHITE: Horace [*A.* 1903]; High Road, Loughton, Essex; and Station Road, Loughton, Essex.
Proposed by H. Tooley [*F.*], Geo. H. Fellowes Prynne [*F.*], Paul Waterhouse [*F.*].

As ASSOCIATES (56).*

ADAMS: Maurice Spencer Rowe [*S.* 1909]; "Edenhurst, Bedford Park, Chiswick, W.
Proposed by Maurice B. Adams [*F.*], W. E. Riley [*F.*], Alfred W. S. Cross [*F.*].

ANGUS: Laurence Mortimer [*S.* 1910]; c/o S. K. Greenslade, Esq., 11 Gray's Inn Square, W.C.; and 96 Heath Street, Hampstead, N.W.
Proposed by John Ely [*F.*], Percy S. Worthington [*F.*], Alfred E. Corbett [*F.*].

BARKS: Edward Ernest [*Special Examination*]; 19 Charing Cross Road, S.W.; and 39 Oakley Crescent, Chelsea, S.W.
Proposed by W. E. Riley [*F.*], W. Bevan [*F.*], E. H. Bourchier [*F.*].

BAXTER: Paget Logan [*Special Examination*]; 159 Fenchurch Street, E.C.; and Park Cottage, Great Stanmore, Middlesex.
Proposed by Keith D. Young [*F.*], Edwin L. Lutyens [*F.*], Henry Hall [*F.*].

BENIANS: Hubert Joseph [*S.* 1908]; 2 Beresford Road, Goudhurst, Kent.
Proposed by Hugh P. G. Maule [*F.*], Arthur T. Bolton [*F.*], W. A. Forsyth [*F.*].

BENSLYN: William Thomas [*S.* 1905]; 122 Colmore Row, Birmingham; and "Kylemore," Chesterton Road, Cambridge.
Proposed by Prof. Beresford Pite [*F.*], Arthur Harrison [*F.*], Charles E. Bateman [*F.*].

BEVIS: Richard Henry Percy [*S.* 1906]; Elm Grove Chambers, Southsea.
Proposed by Chas. W. Bevis [*F.*], Harry B. Measures [*F.*], J. W. Walmisley [*F.*].

BLACKFORD: Arthur George [*S.* 1907]; c/o Walter Tapper, Esq., 10 Melina Place, N.W.; and 12 King's Avenue, Ealing, W.
Proposed by Harry Redfern [*F.*], Hugh P. G. Maule [*F.*], Walter Tapper [*A.*].

BROAD: Kenneth Stephen [*S.* 1909]; c/o A. E. Durand, Esq., 21 Princes Street, Cavendish Square; and 166 West Hill, Putney, S.W.
Proposed by Fred. Rowntree [*F.*], Maurice B. Adams [*F.*], A. Heron Ryan-Tenison [*F.*].

BROWN: Baldwin [*S.* 1903]; Town Hall, Bradford; and "The Ark," Wigan Street, Bradford.
Proposed by Jas. Ledingham [*F.*], Rhodes Calvert [*F.*], H. S. Chorley [*F.*].

BROWN: Murray [*S.* 1910]; c/o W. R. Davidson, Esq., 8 New Square, Lincoln's Inn; and 55 Southampton Row, W.C.
Proposed by Herbert Wigglesworth [*F.*], David Barclay Niven [*F.*], Harry Redfern [*F.*].

BULLOCK: John Edgar [*S.* 1907]; c/o W. A. Pite, Esq., 116 Jermyn Street, S.W.; and "Fernleigh," Blackheath, S.E.
Proposed by William A. Pite [*F.*], Prof. Beresford Pite [*F.*], W. H. Seth-Smith [*F.*].

CLARKE: Leonard Harris [*S.* 1910]; Architect's Department, Borough Surveyor's Office, Harrogate; and "Hawkstone," Dragon Parade, Harrogate.
Proposed by T. Edward Marshall [*F.*], Geo. Bland [*F.*], Percival Bown [*F.*].

DAVIES: Joseph Charles Gladstone [*S.* 1909]; Tanyrallt, Morriston, Glamorgan.
Proposed by Glendinning Moxham [*F.*].

DAVIES: William Frederick [*S.* 1907]; c/o F. B. Hobbs, Esq.; 51 North John Street, Liverpool; and Brook House, Sanghall Road, Chester.
Proposed by Frank W. Simon [*F.*], T. Taliesin Rees [*F.*], Otis D. Black [*F.*].

DAVIS: Charles [*Special Examination*]; 50 High Street, Putney, S.W.; and 58 Pennard Road, Shepherd's Bush, W.
Proposed by R. Phené Spiers [*F.*], C. Harrison Townsend [*F.*]

* All the applicants for Associateship passed the Qualifying Examination in June last.

EDESON : Charles Alva [*Special Examination*]; Architect's Department, County Education Offices, Derby; and 65 Park Grove, Derby.
Proposed by Percy H. Currey [*F.*], T. H. Thorpe [F.], F. E. Pearce Edwards [*F.*].

EVANS : Arthur Frederic [*S.* 1908]; c/o Hastwell Grayson, Esq., Royal Liver Buildings, Liverpool; and Fazakerley House, Prescot, Lancs.
Proposed by Hastwell Grayson [*F.*], W. E. Willink [*F.*], John Woolfall [*F.*].

FINNING : Leonard John [*S.* 1907]; Sand Rock, Pinhoe, Exeter.
Proposed by James Jerman [*F.*], James Crocker [*F.*], Harbottle Reed [*F.*].

GARBUTT : Wilfred Thomas [*S.* 1909]; City Architect's Department, Town Hall, Bradford; and 7 Blenheim Mount, Bradford.
Proposed by F. E. Pearce Edwards [*F.*], E. M. Gibbs [*F.*], R. G. Kirkby [*F.*].

GORRINGE : Wilfred Stuart [*S.* 1907]; 8 Clinton Place, Seaford; and Chynston, Seaford, Sussex.
Proposed by Frank E. Smee [*F.*], Arthur F. Usher [*F.*], Hugh P. G. Maule [*F.*].

GOODWIN : Bernard Malcolm [*S.* 1906]; c/o Andrew N. Prentice, Esq., 10 Norfolk Street, W.C.; and Hurst View, South Park Hill Road, Croydon, Surrey.
Proposed by Andrew N. Prentice [*F.*], Prof. F. M. Simpson [*F.*], Leonard Stokes [*F.*].

HAKE : Guy Donne Gordon [*S.* 1909]; 9 Park Mansions, South Lambeth Road, S.W.
Proposed by Thomas E. Collcutt [*F.*], Sir Ernest George [*F.*], Hugh P. G. Maule [*F.*].

HARDING : Charles Alfred [*S.* 1911]; 46 Kersland Street, Glasgow, W.
Proposed by W. Forrest Salmon [*F.*], J. Gaff Gillespie [*F.*], James Salmon [*F.*].

HOME : Geoffrey Wyville [*S.* 1909]; 99 Gunterstone Road, West Kensington, W.
Proposed by Walter Cave [*F.*], Hugh P. G. Maule [*F.*].

HOWITT : Thomas Cecil [*S.* 1908]; c/o Messrs. Bromley & Watkins, Prudential Buildings, Nottingham; and Brooklyn, Hucknall Torkard, Notts.
Proposed by Albert N. Bromley [*F.*], Robert Evans [*F.*], Arthur W. Brewill [*F.*].

KEASELEY : John Norman [*S.* 1904]; 4 Adam Street, Adelphi, W.C.; and The Hawthorns, Meadvale, Redhill.
Proposed by Alfred Cox [*F.*], Arthur W. Cooksey [*F.*], Philip H. Tree [*F.*].

KNIGHT : Frank Wardel [*S.* 1909]; 9 Wellington Square, Chelsea, S.W.
Proposed by John W. Simpson [*F.*], S. B. Russell [*F.*], Geoffry Lucas [*F.*].

LAWSON : Wilfrid [*S.* 1909]; c/o L. G. Ekins, Esq., West Blandford Street, Newcastle-on-Tyne; and 41 Woodbine Street, Gateshead.
Proposed by Henry C. Charlewood [*F.*], Joseph Oswald [*F.*], James Bruce [*F.*].

LEROY : Adrien Denis [*S.* 1909]; 21 Gore Road, South Hackney, N.E.
Proposed by Charles Spooner [*F.*], Hugh P. G. Maule [*F.*], S. B. Caulfield [*F.*].

LOGAN : Philip Norman [*S.* 1908]; 10 John Street, Bristol; and Eastfield, Southville, Bristol.
Proposed by Wm. V. Gough [*F.*], George H. Oakley [*F.*], W. S. Skinner [*F.*].

LONG : Charles William [*S.* 1908]; Rhodehurst, 108 Leigham Court Road, Streatham, S.W.
Proposed by Frederick Wheeler [*F.*], W. Hilton Nash [*F.*], Hugh P. G. Maule [*F.*].

MARTIN : Moritz Richard [*S.* 1905]; Municipal Offices, Brentford, Middlesex; and 14, Woodfield Road, Ealing, W.
Proposed by J. W. Stanley Burmester [*F.*], E. H. Bourchier [*F.*], Wm. Woodward [*F.*]

MENNIE : Frederick Edward [*S.* 1907]; 1 New Court, Lincoln's Inn, W.C.; and 46 Harford Street, Mile End, E.
Proposed by J. Osborne Smith [*F.*], R. Langton Cole [*F.*], H. D. Searles-Wood [*F.*].

MERRIMAN : Harold Ian [*Special Examination*]; 4 Newman's Row, Lincoln's Inn Fields, W.C.; and 27 Young Street, Kensington, W.
Proposed by E. Guy Dawber [*F.*], Sir Ernest George [*F.*], Harry Redfern [*F.*].

MOTTRAM : Alfred Hugh [*S.* 1910]; c/o Raymond Unwin, Esq., "Wyldes," Hampstead, N.W.; and 18 Denning Road, Hampstead, N.W.
Proposed by Raymond Unwin [*F.*], T. Phillips Figgis [*F.*], H. V. Lanchester [*F.*].

OWEN : George Burgoyne [*S.* 1909]; Wahroonga, Sydney, New South Wales.
Proposed by Frank M. Elgood [*F.*], Banister Fletcher [*F.*], Arthur Ashbridge [*F.*].

PARKER : Thomas Abel [*S.* 1908]; Corporation of Bury, Education Department; and 18 Hall Street, Cole, Lancashire.
No Proposers.

PATERSON : John Wilson [*S.* 1909]; H.M. Office of Works, Edinburgh; and Verbena Villa, Sciennes Gardens, Edinburgh.
Proposed by W. T. Oldrieve [*F.*], J. M. Henry [*F.*], John Watson [*F.*].

PRITCHARD : Ivor Mervyn [*S.* 1909]; Menai Lodge, Chiswick, W.
Proposed by Louis Ambler [*F.*], Hugh P. G. Maule [*F.*], Jos. Owen [*F.*].

SAMSON : Hayward Lewis [*S.* 1904]; 13 Victoria Street, Westminster; and Ixworth Court, Palace Road, Streatham Hill, S.W.
Proposed by Leonard Stokes [*F.*], Hugh P. G. Maule [*F.*], H. Tanner, junr. [*F.*].

SWANNELL : Charles Malcolm [*S.* 1908]; 4 Delaporte Gardens, Muswell Hill, N.
Proposed by Arthur W. Cooksey [*F.*], Alfred Cox [*F.*], Philip H. Tree [*F.*].

SWINDELLS : Francis Harold [*S.* 1909]; 60 Belsize Avenue, Hampstead, N.W.
Proposed by E. Guy Dawber [*F.*], Hugh P. G. Maule [*F.*], William A. Forsyth [*F.*].

TAPPER : Michael John [*S.* 1908]; 10 Melina Place, St. John's Wood, N.W.
Proposed by Max Clarke [*F.*], Matt. Garbutt [*F.*], Walter Tapper [*A.*].

THORNTON : Harold [*S.* 1905]; 11 Bond Street, Dewsbury; and West Croft, Park Road, Dewsbury.
Proposed by Charles Reilly [*F.*], Frederick W. Ridgway [*F.*], Prof. F. M. Simpson [*F.*].

TICKLE : Arthur George Warnham [*S.* 1906]; Bassishaw House, 70A Basinghall Street, E.C.; and 70 Harvist Road, Kilburn, N.W.
WEST : Harry [*S.* 1906]; H.M. Office of Works, 16 Queen Anne's Gate, S.W.; and 312 Upland Road, East Dulwich, S.E.
WESTBYE : Johannes Thorwaldson [*Special Examination*]; Christiania, Norway.
WHITEHOUSE : Arthur Eli Mitchell [*S.* 1907]; c/o Arthur Brocklehurst, Esq., Palatine Bank Buildings, 10 Norfolk Street, Manchester; and 12 Gibson's Road, Heaton Moor.
WIGZELL : Norman [*S.* 1908]; c/o Geo. T. Brown, Esq., 51 Fawcett Street, Sunderland; and 8 Belle Vue Park, Sunderland.
WILLIAMS : Llewellyn Ebenezer [*S.* 1909]; c/o M. L. Saunders, Esq., 4 Coleman Street, E.C.; and Upwood, Bridle Road, Purley, Surrey.
WILSON : Allen Woodward [*S.* 1903]; District Chambers, Cumbergate, Peterborough; and "Brinkdale," Park Road, Peterborough.
WINTER : Cecil Reynolds [*S.* 1907]; Fir Vale Chambers, Old Christchurch Road, Bournemouth, and 22 Southbourne Grove, Bournemouth.
WORMALD : Harry [*S.* 1904]; Architect's Department, County Hall, Wakefield; and 28 St. Luke's Road, Beeston Hill, Leeds.
WRIGHT : Christopher [*S.* 1907]; c/o Messrs. Niven & Wigglesworth, 104 High Holborn; and 19 Connaught Street, W.
YOUNG : Allan Murray Campbell [*S.* 1905]; 3 Warwick House Street, Charing Cross; and "Dalry," Maryat Road, Wimbledon Common.

Proposed by John Belcher [*F.*], Frank T. Verity [*F.*], W. H. Seth-Smith [*F.*].

Proposed by Sir Henry Tanner [*F.*], J. Osborne Smith [*F.*], Banister Fletcher [*F.*].

Proposed by John W. Simpson [*F.*], Geoffrey Lucas [*F.*], Theodore Fyfe [*F.*].

Proposed by Edward Hewitt [*F.*], Paul Ogden [*F.*], A. E. Corbett [*F.*].

Proposed by Henry C. Charlewood [*F.*], W. Milburn [*F.*], Geo. T. Brown [*F.*].

Proposed by E. B. l'Anson [*F.*], Halsey Ricardo [*F.*], Prof. R. Elsey Smith [*F.*].

Proposed by Lacy W. Ridge [*F.*], W. Charles Waymouth [*F.*], Arthur Keen [*F.*].

Proposed by George A. B. Livesay [*F.*], J. H. Brewerton [*F.*].

Proposed by E. J. Dodgshun [*F.*], Sydney D. Kitson [*F.*], Henry Perkin [*F.*].

Proposed by Herbert Wigglesworth [*F.*], David Barclay Niven [*F.*], Horace Field [*F.*].

Proposed by W. E. Riley [*F.*], W. Campbell Jones [*F.*], Robert J. Thomson [*F.*].

As HON. ASSOCIATES (2).

CRANE : Walter, R.W.S.; Commendatore Royal Crown of Italy, 13 Holland Street, Kensington, W.
MARSHALL : John Hubert, M.A. (Cantab.); Companion of the Indian Empire; Director-General of Archæology in India; Benmore, Simla, India, and East India U.S. Club, St. James's Square.

Proposed by Paul Waterhouse [*F.*], Henry T. Hare [*F.*], Halsey Ricardo [*F.*].

Proposed by James Ransome [*F.*], Robert F. Chisholm [*F.*], Sir Wm. Emerson [*F.*].

Arbitration Room, 9 Conduit Street.

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No. 9 Conduit Street, W. IAN MACALISTER, *Secretary.*

Fig. 6.—Perspective View of the West End Hospital, Charlottenburg (*see page* 39).

MODERN GERMAN HOSPITAL CONSTRUCTION.

By William Milburn, Junr., B.Sc. [*A.*], Henry Saxon Snell Prizeman 1908, Godwin Bursar 1910.

THE study, thought, and attention given to the design, construction, and equipment of hospitals, the large increase in the numbers of these institutions during the last thirty to forty years, and the developments which have taken place during that time in the treatment of the sick, render a study of modern German hospital construction of the utmost interest.

In Germany the general hospitals are erected, equipped, and maintained by the municipalities, each city possessing one or more hospitals according to the population. The system in vogue of compulsory insurance against sickness has had considerable influence on the development of the present hospital system. The institutions are open to all classes of the community, the fees varying from 2*s*. 6*d*. to 15*s*. or 20*s*. per day according to the accommodation.

The University hospitals or "Royal Clinics" are supported by the State and are the centres for medical education and study. The special hospitals correspond to the majority of our charitable institutions for the treatment of the sick, they being endowed or supported by some charitable organisation or religious body, such as the Jewish Hospital at Cologne or the Bürgerspital, Frankfort.

The private clinic or polyclinic, numbers of which are found in every city, is an essentially German institution, founded on club practice, the members being treated as out-patients by the medical officer attached to each clinic. The private hospitals are really nursing homes for the treatment of in-patients.

During recent years very great attention has been paid to post-graduate study and research,

and at present regular courses are given in no less than forty-six cities, while an interesting result of the movement is the establishment of Academies for Practical Medicine in non-University towns, such as Düsseldorf and Cologne.

SITE.

In the selection of sites for the hospitals the greatest care is exercised so as to obtain ample space, pure air, light, and freedom from noise and dirt, the situations being usually on the outskirts of the cities or adjoining large open spaces. The relation of the site to the prevailing winds, the factory and smoke-producing quarters of the city, the ground water level, the height above adjoining rivers, and the subsoil, are all matters which receive the greatest attention. Whenever possible, land which has not previously been built upon is selected, and if practicable streets are arranged on all sides. The electric tramway service invariably connects all parts of the city with the hospital.

The area of the site per bed varies considerably, at Hamburg Eppendorf it being 130 square yards, at Nuremberg 123 square yards, at Dresden 86 square yards, at Hamburg St. Georg 72.7 square yards, at the Virchow, Berlin, 153 square yards, and at Charlottenburg 131 square yards.

The sites for the University hospitals and polyclinics are naturally more often in the centre or near the centre of the cities than on the cutskirts.

ACCOMMODATION AND STAFF.

In comparison with the accommodation of the average English hospital, that of the German institutions is very large, as for example Hamburg Eppendorf and the Virchow, Berlin, each with 2,000 beds and a correspondingly large staff. It has been found, however, that when such a large number of patients are massed together the difficulties of administration are greatly increased, and the most recent view seems to be that 1,500 beds should be the maximum for one hospital.

In the majority of towns one general hospital is sufficient to meet the requirements; the larger, however, have more, Munich having three, Dresden two, Hamburg three, and Berlin four.

Generally speaking, every general hospital provides accommodation for all classes of cases, which are separated into departments for medical, surgical, infectious, maternity, gynæcological, children's, skin and venereal, etc., diseases, the buildings for each of these classes being specially designed and equipped to meet the requirements of each particular disease.

The administration of the hospitals is usually under the control of a superintendent director (Verwaltungs-Direktor), while two medical directors have charge of the medical and surgical departments respectively. All doctors are paid for their services, and the larger number reside in the hospital. The nursing staff corresponds to the English, usually consisting of a matron (Oberschwester), head nurses (Schwestern), and nurses or probationers (Pflegerinnen), while in some hospitals the nursing is in the hands of a religious sisterhood. A large proportion of the domestic and technical staffs reside in the hospital.

GENERAL ARRANGEMENT OF THE BUILDINGS ON THE SITE.

Owing to the varying requirements of the municipalities, considerable differences are found in the lay-out of the general hospitals, and a great variety of plans are found; but nevertheless, in a survey of the block plans of the principal hospitals erected during the last thirty or forty years, one can trace a definite development, largely owing to the fact that each new hospital is based on a careful study of contemporary designs and on all that have preceded it.

The modern era of German hospital construction may be said to date from the erection of the Moabit Hospital, Berlin, 1872, which, guided by the lessons derived from the Franco-German and the American Civil Wars, is designed on the pure pavilion system, in which each block is entirely separate and detached from the rest. Here [fig. 1] the administrative block is placed adjoining the main entrance, and the domestic and technical blocks are grouped close to it, while the plan is laid out about a central axis with the pavilions of the medical department to one side and those of the surgical to the other, all the pavilions being of one story. Further developments may be traced in the lay-out of the second great Berlin hospital at Friedrichshain, 1874, where two-story pavilions were employed and a modification in the block plan was introduced, owing to the adoption of the north and south axis for the pavilions as against the east and west at Moabit, and in the next Berlin hospital, Am Urban, 1883-90, where a simple symmetrical plan was obtained.

The Eppendorf Hospital, Hamburg, perhaps the most celebrated hospital in the world, opened in 1889, is designed in the pure pavilion style and has been so well kept up to date by additions and improvements that it holds its own with many of the more modern institutions. The hospital is situated in Eppendorf in the north of the city, its distance from the central point, the Rathaus, being, as the crow flies, $2\frac{4}{5}$ miles. The total area of the land purchased by the municipality was about 136 acres, of which the hospital proper occupies about 46 acres, while the maternity, epidemic, and ophthalmic departments occupy another portion, and the remainder to the front of the hospital is laid out as a public park. The total accommodation is 2,150 beds, while the staff numbers 820, of whom some 670 reside in the hospital.

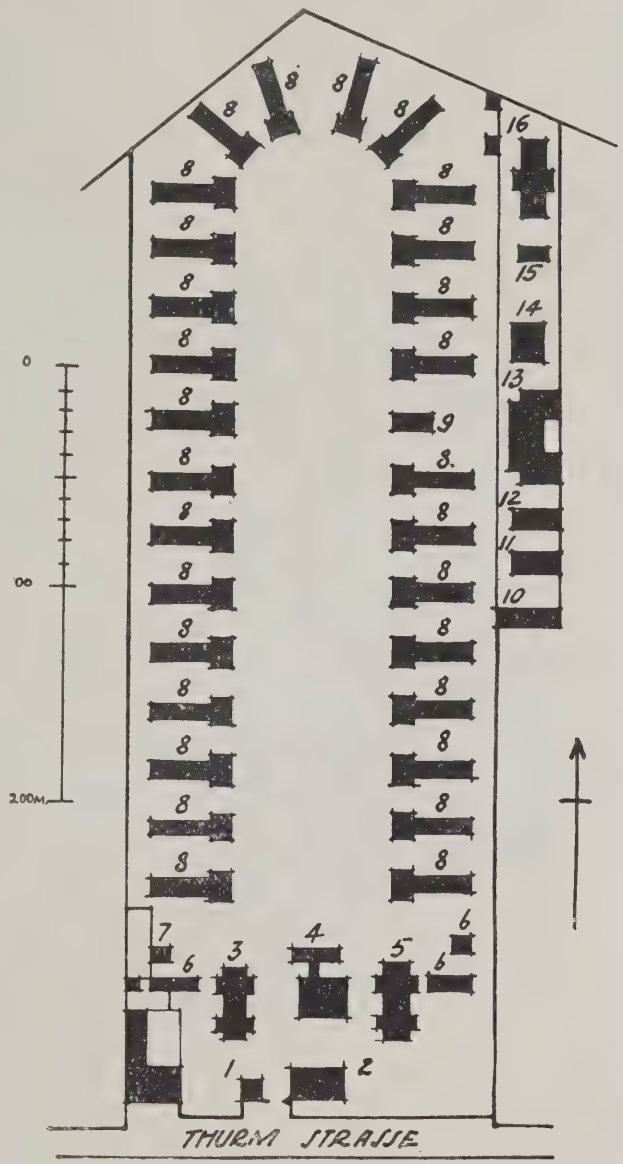

Fig. 1.—Block Plan of the Moabit Hospital, Berlin.
1, Entrance Lodge. 2, Administrative Block. 3, Kitchen Block. 5, Laundry Block. 8, Pavilions. 13, Boiler House. 16, Mortuary Block.

As will be seen from the block plan [fig. 2], the institution consists of over 100 separate buildings, of which some 85 are for the reception of the sick, symmetrically placed upon the site about a central axis, which separates it into two sides, that for men to the east, for women to the west.

The administrative block, through which all patients must pass, is situated at the southern

end of the axis, and the pavilions, the majority of which are of one story, are arranged in parallel rows with streets and gardens between them, their long axes running from north-west to south-east. The first two rows form the surgical department, the next three the medical department, the next the tuberculosis department, while the remaining seven blocks, which

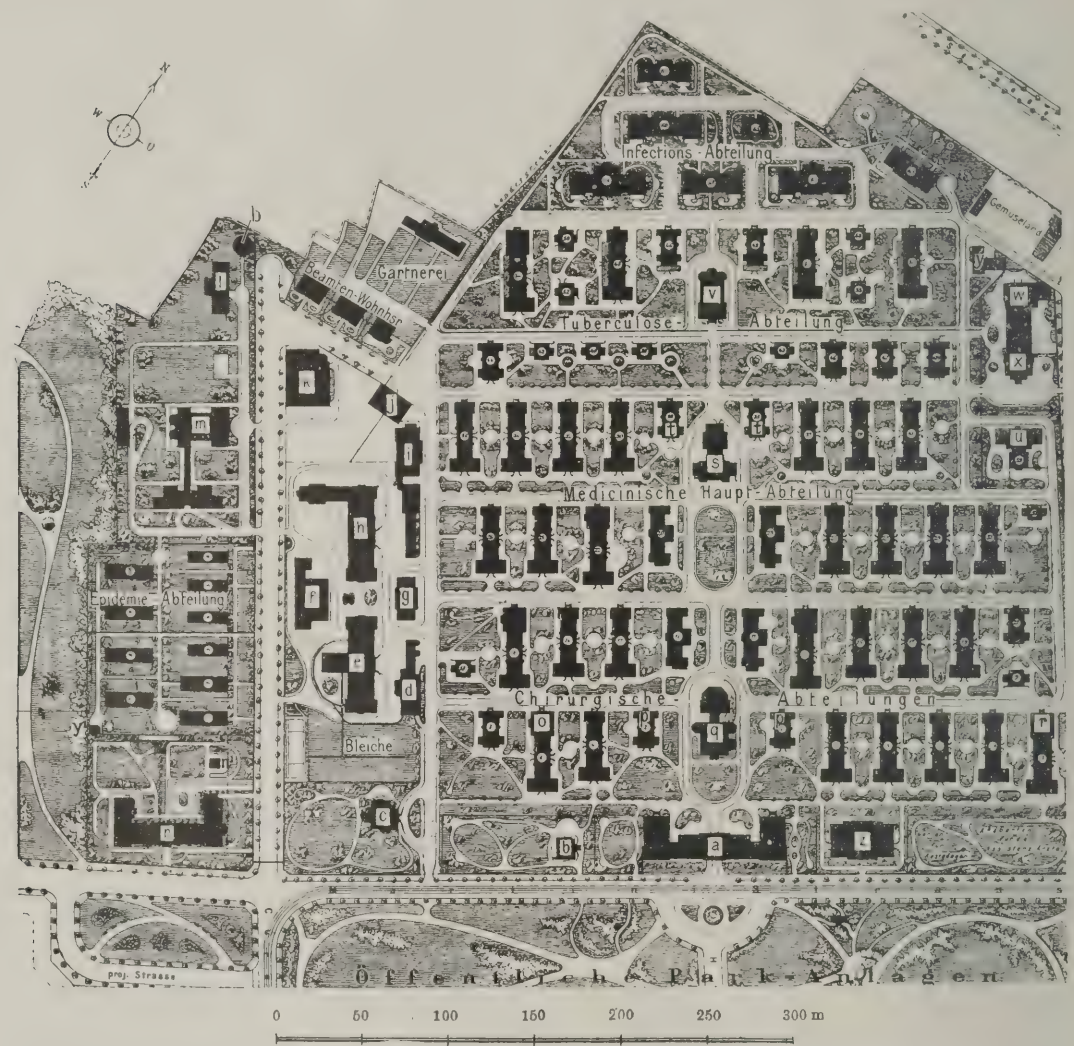

FIG. 2.—BLOCK PLAN OF THE EPPENDORF HOSPITAL, HAMBURG.

(Chirurgische-Abteilungen = Surgical Department. Medizinische Haupt-Abteilung = Medical Department. Tuberculose-Abteilung = Tuberculosis Department. Infections-Abteilung = Infectious Diseases Department. Epidemie-Abteilung = Epidemic Department.)

a Administrative Block. **b** Administrative Director's Home. **c** Medical Director's Home. **d** Disinfection Block. **e** Laundry Block. **f** Boiler House. **g** Economy Block. **h** Kitchen Block. **i** Nurses' Home. **j** Ice House. **k** New Boiler House. **l** Maternity Department Isolation Block. **m** Maternity Department. **n** Ophthalmic Department. **o** Children's Pavilion. **p** Receiving Pavilion of the Surgical Department. **q** Operation House. **r** Children's Pavilion. **s** Bath House. **t** Receiving Pavilion of the Medical Department. **u** Delirium Tremens Pavilion. **v** Clinical Lecture Theatre and Röntgen Institute. **w** Pathological Institute. **x** Mortuary Chapel Block. **y** Drainage Disinfection Block. **z** Curative Gymnastics Block.

were erected in 1905-7, form the infectious diseases department. In the centre of the surgical department is the operation-house, in the centre of the medical the bath-house, and in the centre of the tuberculosis the Röntgen Institute. The domestic blocks, comprising the kitchen and laundry blocks, boiler-house, and disinfection block, are grouped together beyond a street

to the west of the women's side, while still further beyond are the pavilions of the ophthalmic, epidemic, and maternity departments.

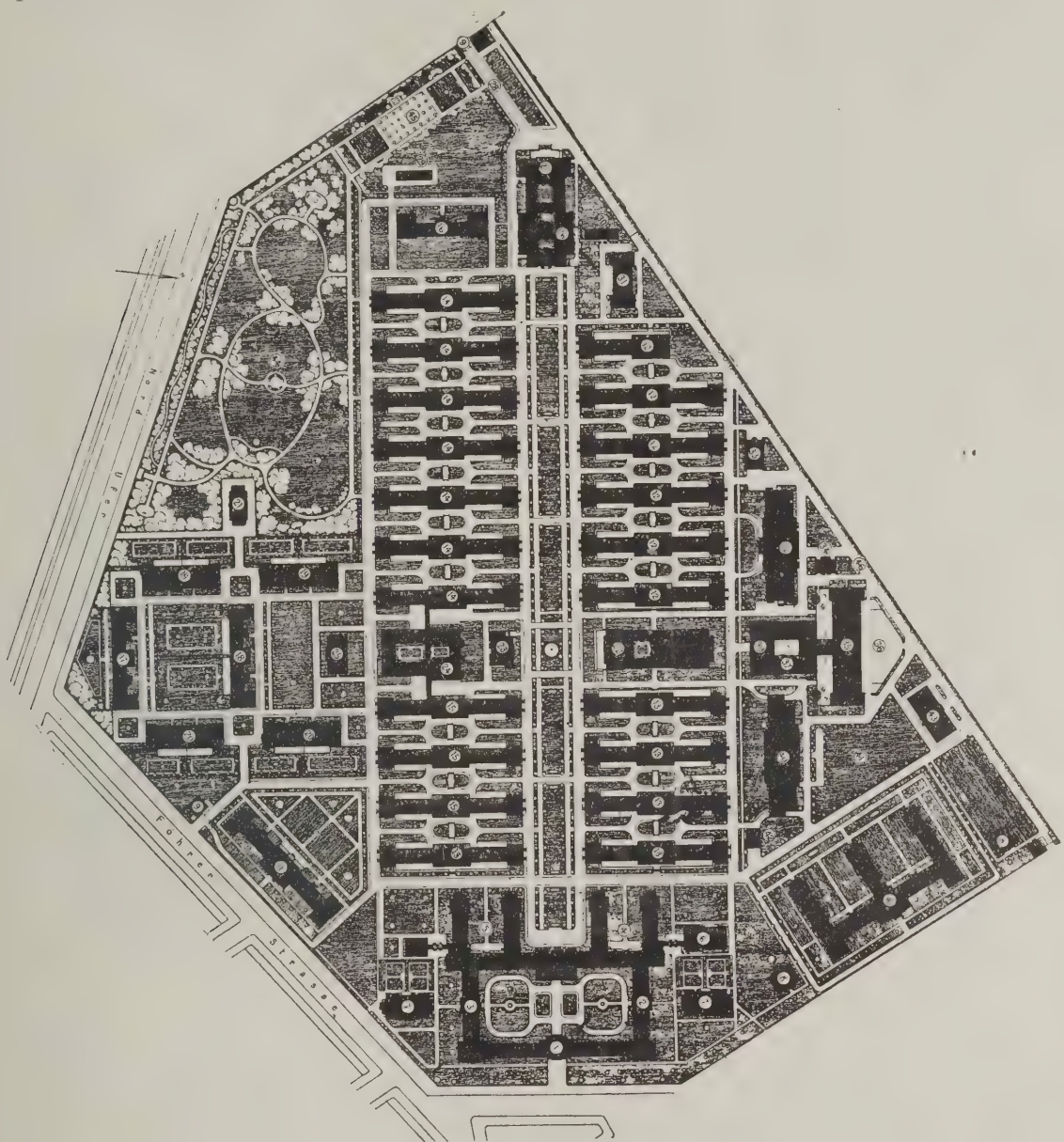

FIG. 3.—BLOCK PLAN OF THE VIRCHOW HOSPITAL, BERLIN.

Administrative Block. 2, Medical Officers' Home. 3, Nurses' Home. 4, Gynæcological Department. 5, Maternity Department. 6, Medica Officers' Casino. 7, Directors' Houses. 8, Officials' Houses. 9, Lodges. 10, Skin and Venereal Diseases Department (Men). 11, Skin and Venereal Diseases Department (Women). 12, Medical Department (Men). 13, Medical Department (Women). 14, Surgical Department (Men). 15, Surgical Department (Women). 16, Violent Patients' Pavilion. 17–21, Infectious Diseases Department. 22, Bath House. 23, Dispensary. 24, Operation House. 25, Röntgen House. 26, Pathologic-Anatomical Institute. 27, Mortuary Chapel. 30, Anima House. 31, Disinfection Block. 32, Kitchen Block. 35–39, Boiler and Engine House Block. 40, Laundry Block. 43, Workshops.

Other fine hospitals erected on the pure pavilion system are the Johannstadt Hospital, Dresden, 1901, the reconstruction and reorganisation of the St. Georg Hospital, Hamburg, 1899-1910, and the General Hospital, Nuremberg, 1897.

The latest hospital erected in the pure pavilion style is the Virchow Hospital, Berlin, opened in 1906, which is said to be in many respects the finest hospital in the world. This is the fourth municipal hospital for Berlin, it being situated on a site, formerly an artillery parade-ground, some 63½ acres in extent, in the northern quarter of the city close to a large wood. The total accommodation is 2,000 beds, and the staff numbers some 700, who reside in the hospital.

The buildings [fig. 3] are symmetrically placed about two axes, the principal from east to west, the transverse from south to north. Controlling the main entrance to the hospital is the administrative block, which with the doctors' and nurses' homes and the maternity and gynæcological departments is planned round a courtyard. The principal axis then traverses the central avenue some 500 yards long and 40 yards wide, at the western extremity of which is the mortuary and pathological block with separate access to the adjoining street. To the

Fig. 4.—The Surgical Department, the Virchow Hospital, Berlin.

south of the central avenue are the pavilions of the surgical department [fig. 4], to the north those of the medical department. The transverse axis divides the hospital into two sides, to the east for women, to the west for men. At the southern extremity of this axis is the infectious diseases department with separate access from the Föhrer Strasse. In the centre of the surgical department is the operation-house, and in the centre of the medical the bath-house, while at the northern extremity of the axis are the domestic and technical blocks comprising the kitchen and laundry, boiler and engine-house, etc., with separate road for external traffic. Separate blocks are provided for men and women for skin and venereal diseases, and a separate pavilion for violent patients. There is no system of classes of patients in this hospital. The institution is remarkable for the lay-out of its grounds, some two-thirds of which consist of parks and gardens planted with trees and flowers.

There are, however, great disadvantages in the pavilion system proper, for it can well be imagined that in wet and stormy weather the difficulties of transporting the patients from the

pavilions to and from the operation-house, the conduct of the various services, and the conveyance of the food from the kitchen block, become very great, and considerable inconvenience is caused to the staff and patients thereby. The majority of the recent examples either show or have the tendency to adopt the combined corridor and pavilion system, in which the separate blocks are linked up to one another by closed corridors.

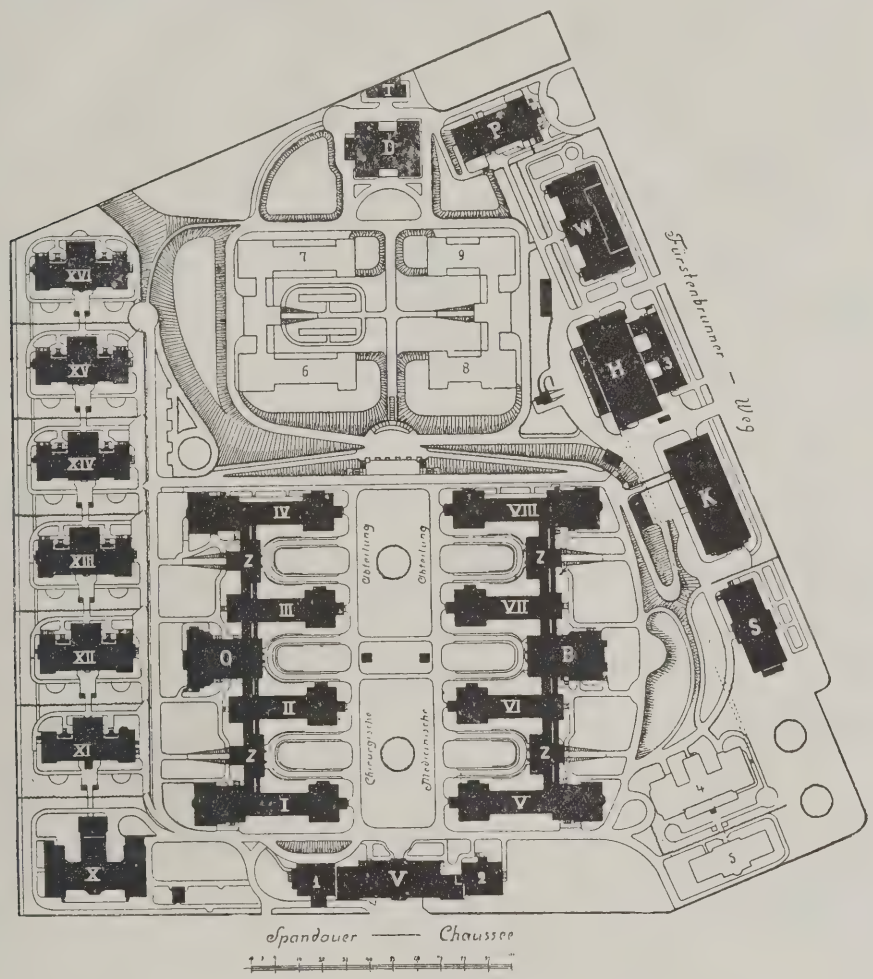

FIG. 5.—BLOCK PLAN OF THE WEST END HOSPITAL, CHARLOTTENBURG.

V. ADMINISTRATIVE BLOCK.—1, Receiving Department; 2, Dispensary. I–IV. SURGICAL PAVILIONS. V–VIII. MEDICAL PAVILIONS. X. GYNÆCOLOGICAL PAVILION. XI–XVI. ISOLATION PAVILIONS.

O, Operation House. B, Bath House. Z, Receiving Blocks. P, Pathologic-Anatomical Block. T, Block for Experimental Animals. D, Disinfection Block. S, Nurses' Home. K, Kitchen Block. H, Boiler House Block. 3, Staff Homes. W, Laundry Block. 4, Future Private Patients' Pavilion. 6, 7, 8, 9, Future Pavilions. 5, Future Block for Gymnastic Exercises.

This is well seen in the block plan [fig. 5] of the West End Hospital, Charlottenburg, opened in 1904. Here the administrative block controls the main entrance, and the pavilions of the medical and surgical departments are symmetrically placed to the rear on either side of a large open space. The pavilions are of two stories, and it will be seen [fig. 6, p. 33] that those of the surgical department are linked up to one another and the operation-house in the centre by a closed corridor, as are those of the medical department to the bath-house. The pavilions of the infectious diseases department are one-story detached blocks to one side

of the site, while at the other side adjoining the street and at a lower level are the domestic and technical blocks; the food service to the pavilions on the higher level being conducted from the first floor of the kitchen block over a bridge.

Cologne Lindenburg, 1908 [fig. 7], shows a still further development in that the two parallel connecting corridors are carried through to the administrative block, linking up the latter to the pavilions of the medical and surgical departments and the operation and bath houses. This hospital is one of the most interesting modern German institutions, the greatest care having been expended in its planning, construction, and equipment. The building originally on the site was a lunatic asylum, which with new buildings added in 1897 and 1900 was transformed into a general hospital. In 1905, a much larger site to the east having been acquired, the new hospital, with which is incorporated the Academy of Medicine, was erected, and the older buildings reconstructed, which accounts for the asymmetrical arrangement of the domestic and technical blocks and the pavilions of the infectious diseases department. The total accommodation is 1,108 beds.

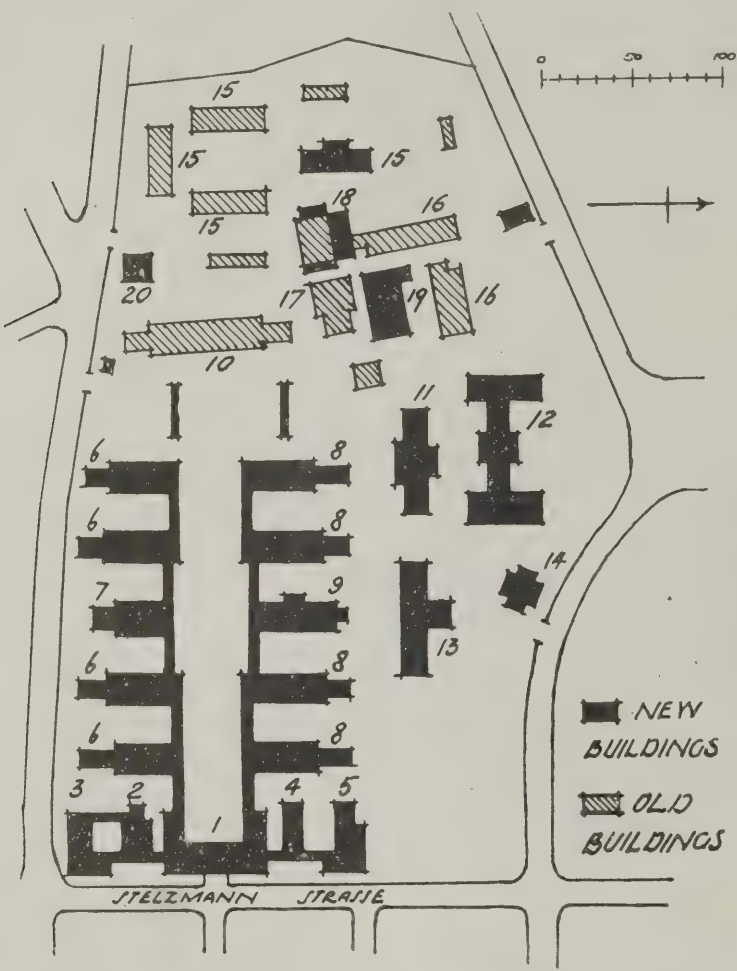

Fig. 7.—Block Plan of the Lindenburg Hospital, Cologne.

1, Administrative Block. 2, Chapel. 3, Nurses' Home. 4, Hall. 5, Private Patients' Pavilion. 6, Medical Pavilions. 7, Bath House. 8, Surgical Pavilions. 9, Operation House. 10, Tuberculosis Pavilion. 11, Pathologic-Anatomical Block. 12, Psychiatrical Clinic. 13, Children's Clinic. 14, Mortuary Chapel. 15, Infectious Diseases Pavilions. 16, Skin and Venereal Diseases Pavilions. 17, Kitchen Block. 18, Laundry Block. 19, Boiler House Block. 20, Disinfection Block.

Finally we come to the Third Hospital, Munich, 1908 [fig. 8], which is from every point of view of the greatest interest. The site is about 45 acres in extent and is situated in the northern portion of the city, being practically surrounded by open country on all sides. Owing to the high level of Munich and the sudden changes of temperature to which it is subject, it was thought inadvisable to erect a large number of detached one-story pavilions holding from 30 to 40 patients each, as in the older type of hospital, and better to erect large blocks of three stories, each holding some 150 patients, and connect the whole of the pavilions of the medical and surgical departments, the operation and bath houses, the administrative block, and the kitchen block by closed one-story corridors.

The administrative blocks and nurses' home face the Cölner Platz, two parallel corridors with an interspace of some 60 yards branching off to the north. Disconnected from these by cut-off corridors are, to either side, the six large pavilions. The vertical axis of the plan in this case separates the hospital into men's and women's sides, not as at the Virchow, Charlottenburg, or Cologne Lindenburg, the transverse axis; so that the operation-house and the bath-house are placed on the central axis between the first and second pairs of pavilions respectively, and are approached from either side, while the kitchen block is placed between the third pair of pavilions. Three courts are thus formed between these buildings, but as the

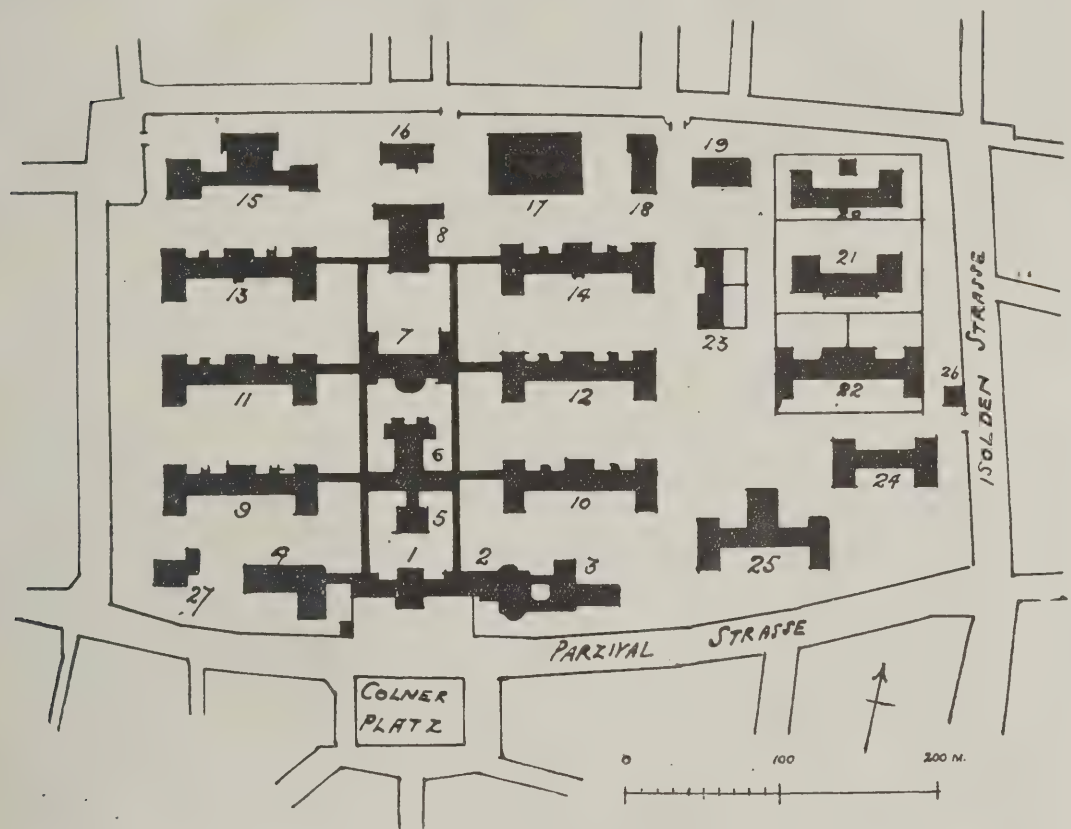

FIG. 8.—BLOCK PLAN OF THE THIRD HOSPITAL, MUNICH.

1, Administrative Block. 2, Chapel. 3, Nurses' Home. 4, Offices and Dispensary. 5, Ambulatorium (Out-patients). 6, Operation House. 7, Bath House. 8, Kitchen Block. 9, 10, Surgical Pavilions. 11, 12, 13, 14, Medical Pavilions. 15, Laundry and Disinfection Block. 16, Greenhouse. 17, Boiler and Engine House. 18, Workshops Block. 19, Pathological Institute. 20, Isolation Block. 21, Infectious Diseases Pavilion. 22, Skin and Venereal Diseases Pavilion. 23, Mental Diseases Pavilion. 24, Children's Pavilion. 25, Gynæcological Pavilion. 26, Lodge. 27, Director.

operation-house, bath-house, and kitchen block are principally of one story, the access of light and air is not interfered with. The boiler-house and laundry, the disinfection-house, and the pathological institute are detached blocks to the rear of the site; while in the eastern portion of the land, with separate access, detached blocks for skin and venereal diseases, infectious diseases, and isolation are provided, and separate pavilions for gynæcological cases, children, and mental diseases will be erected. This hospital when complete will accommodate some 1,300 patients, the portion now erected containing about 500 beds.

The new hospitals at Rixdorf and Mülhausen-i.-Els all show connecting corridors linking up their pavilions.

Such hospitals as the Royal Charité, Berlin, the City Hospital, Frankfort, or the General Hospital, Düsseldorf, with which is incorporated the Academy of Medicine, in which the blocks are all detached, are, as it were, a series of special hospitals, each under the control of its own professor and staff, with common administrative, admission, domestic, and technical blocks. In these hospitals the operating theatres are in the blocks containing the surgical department, and at Düsseldorf patients are conveyed to and from the bath-house in a subway.

The smaller hospitals and clinics, with an accommodation up to about 200 beds, are usually erected on the block system, with the patients', administrative, and domestic rooms in one block, and the technical rooms, boiler-house, and the mortuary in another block or blocks. Excellent examples of this type of plan are the Bürgerspital at Frankfort, the Jewish Hospital at Cologne, or the Royal Ophthalmic and the Royal Psychiatrical Clinics at Munich.

ADMINISTRATIVE BLOCKS.

The administrative blocks of the German hospitals usually form the principal frontage of the institutions, and are designed in a most practical manner. The great point, perhaps, which one notices is that the main entrance to the hospital is for patients, their entrance, as so often in England, not being to one side.

In hospitals erected in the pure pavilion style one finds the administrative block of a definite type, as at Eppendorf, Dresden Johannstadt, or Nuremberg [fig. 9]. In the centre of the ground floor is a large carriage-hall [fig. 10], often elaborately treated, through which the patients are conveyed in the ambulance-wagons to the doors of their respective pavilions, and which is also used on visiting days for the assembly of patients' friends. The main entrance is always under the control of the porter. In one wing of the ground floor is the receiving and admission department (in which there is always a doctor on duty for the reception of accidents, and in which all patients are examined and the admission formalities complied with), and the various administrative offices, such as the directors', clerks', and treasurers' offices, and the waiting and messengers' rooms. In the other wing is the dispensing department, comprising the dispensary, laboratories, drug-stores, and dispensers' apartments. On the first floor is the doctors' home, comprising recreation- and bed-rooms, and the meeting-room for the administrative body, while on the roof floor are the servants' rooms, and in the basement the porters' and male servants' apartments, and stores. The chapel is sometimes in the administrative block as at Nuremberg or Schöneberg (first floor), or it is sometimes detached as at Eppendorf or Düsseldorf.

There are, however, certain objections to this type of plan, notably a patient with an infectious disease may be introduced into the centre of the administrative block, and the reception of accidents is often a distressing sight. These objections are overcome at Charlottenburg West End, by placing the receiving and admission department in a one-story wing at one end of the block, with separate entrance, and balancing this at the opposite end by a similar wing containing the dispensing department.

At the Virchow Hospital, Berlin [figs. 11 and 12], the administrative block is planned round a courtyard. In the centre of the front, which is of one story, is the main entrance to the hospital through a carriage-hall, with to one side the offices, and to the other the receiving and admission department. Patients are completely examined here, except the serious cases, which are only quickly examined in the ambulance-wagon and then sent to their respective pavilions. The north side of the courtyard is formed by the three-story doctors' home, the south side by the nurses' home, and the remaining side by a three-story block, which with outshoots contains the maternity and gynæcological departments. In the centre of this block is a carriage-way to the hospital proper, and the principal staircase to the upper floor to the large assembly-hall and nurses' class-room. This plan enables a very fine architectural treat-

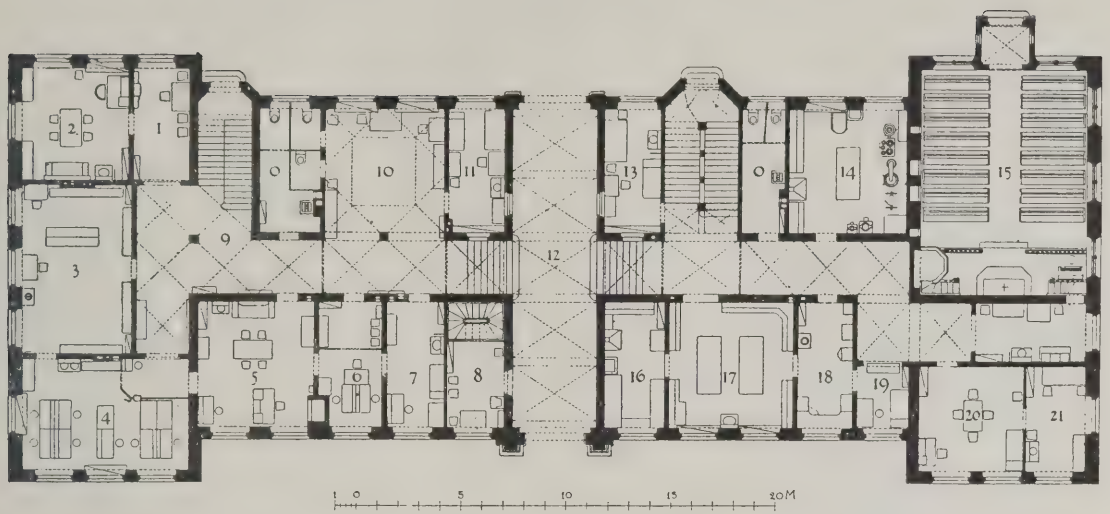

FIG. 9.—GROUND FLOOR PLAN OF THE ADMINISTRATIVE BLOCK, NUREMBERG.

1, 2, Medical Director. 3, 4, Administrative Offices. 5, Administrative Director. 6, Receiving Room. 7, Examination Room. 8, Porter. 10, Patients' Waiting Room. 11, Night Porter. 12, Carriage Hall. 14, 16, 17, 18, 19, Dispensary and Laboratories. 13, 20, 21 Dispensers' Apartments. 15, Chapel and Vestry.

FIG. 10.—THE ENTRANCE HALL IN THE ADMINISTRATIVE BLOCK, DRESDEN JOHANNSTADT HOSPITAL.

ment to be given to the courtyard, but the planning of the maternity and gynæcological departments appears to have been somewhat influenced to suit this purpose. The doctors'

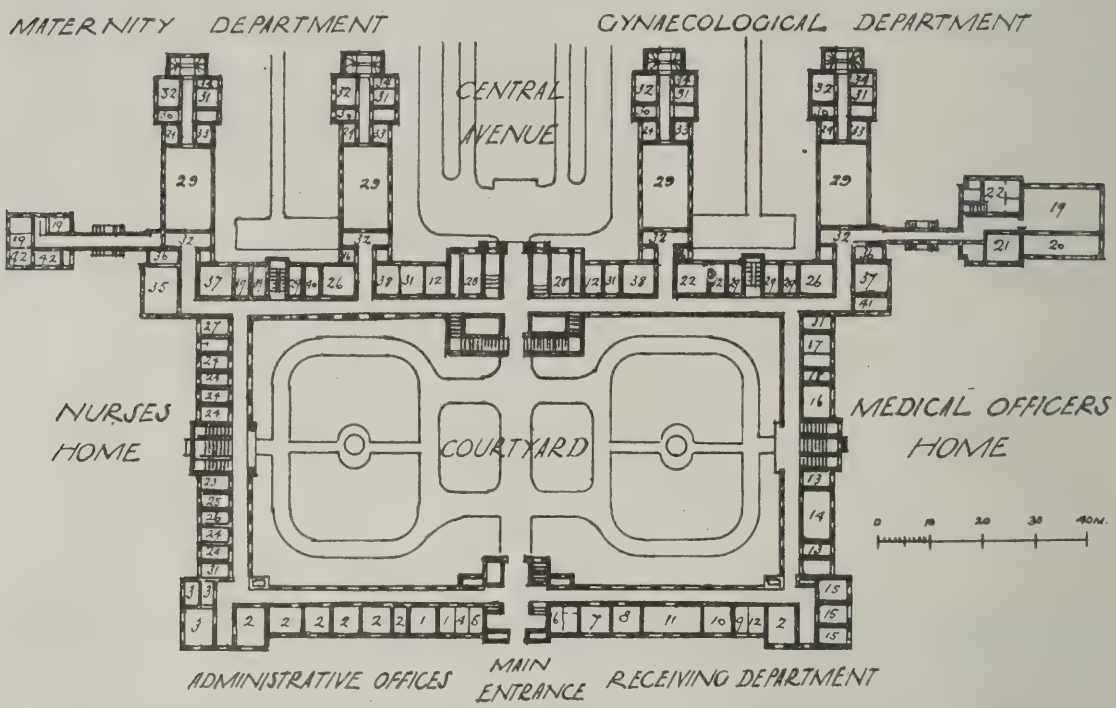

Fig. 11.—Ground Floor Plan of the Administrative Block, the Virchow Hospital, Berlin.

1, Administrative Director. 2, Office. 3, Treasurer. 4, Telephone Exchange. 5, Messenger. 6, Porter. 7, Men's Registration. 8, Men's Examination. 9, Women's Registration. 10, Women's Examination. 11, Waiting Room. 12, Attendant. 13, Director. 14, Committee Room. 15, Medical Officer. 16, Library. 17, Scientific Library. 18, Reading Room. 19, Dining Room. 20, Loggia. 21, Card Room. 22, Scullery. 23, Nurses' Examination. 24, Nurse. 25, Visitors. 26, Linen. 27, Dirty Linen. 28, Receiving Room. 29, Ward. 30, Lavatory. 31, Bath Room. 32, Day Room. 33, Apparatus. 34, Cleaner. 35, Labour Room. 36, Instruments. 37, Examination. 38, Doctors' Duty Room. 39, Head Nurse. 40, Nurse. 41, Anæsthetising Room. 42, Laboratory.

recreation-rooms are contained in a detached block to the north, which is balanced by a similar block to the south, originally intended to contain the septic cases of the maternity department.

Fig. 12.—General View of the Administrative Block, the Virchow Hospital, Berlin.

From the English point of view the most interesting administrative blocks are those of Cologne and Munich, as both these hospitals are planned on the corridor pavilion system. At

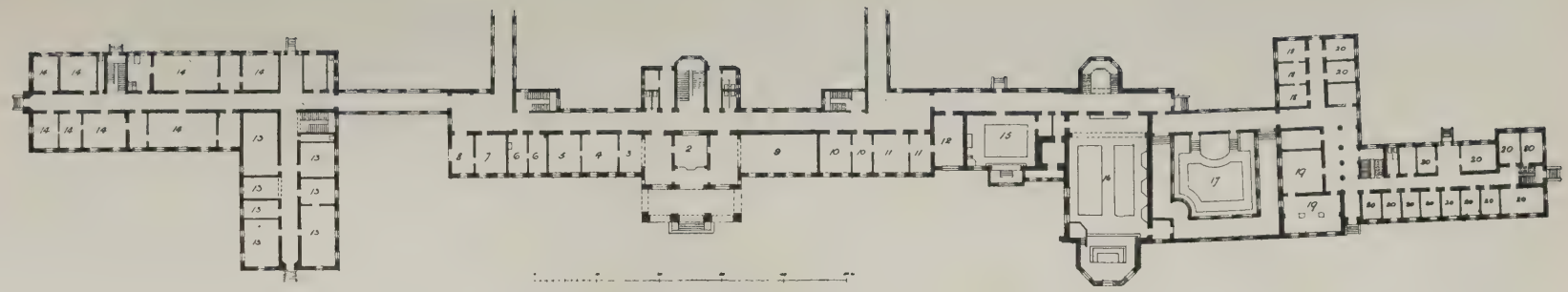

FIG. 13.—GROUND FLOOR PLAN OF THE ADMINISTRATIVE BLOCK, THE THIRD HOSPITAL, MUNICH.

1, Main Entrance. 2, Porter. 3, Patients' Waiting Room. 4, Registration Room. 5, Examination Room. 6, Matron. 7, Telephone Exchange. 8, Ambulance Entrance. 9, Waiting Room for Patients' Friends. 10, Head Medical Officer. 11, Director. 12, Committee Room. 13, Administrative and Accountants' Offices. 14, Dispensing Department. 15, Protestant Chapel. 16, Catholic Church. 17, Cloisters. 18, Home Sister. 19, Linen. 20, Nurses' Bedroom.

FIG. 14.—GENERAL VIEW OF THE ADMINISTRATIVE BLOCK, THE THIRD HOSPITAL, MUNICH.

Cologne the central block is of three stories providing the usual accommodation, with a central carriage-hall through which the ambulance-wagons can convey the patients to the door of each pavilion. A central corridor runs from north to south, to the south being the chapel and the nurses' home, so planned as to form a cloister between the two, as the nursing here is in the hands of a religious sisterhood. To the north, symmetrically planned, is the assembly-hall, and the three-story pavilion for the accommodation of private patients of the first and second classes.

At Munich III. the principal façade is again formed by the administrative and adjoining blocks [figs. 13 and 14]. In the centre of the main block is the carriage-porch, with porters', admission and examination rooms, and waiting-rooms for patients' friends on visiting days. The side entrance is for the reception of accident or acute cases in the ambulance-wagons. In this hospital the ambulance-wagon does not convey patients directly to the pavilions, they being conducted through the corridors by the attendant. On the upper floors are the doctors' and staff apartments. In a block to the east, and so separated from the receiving department, are the accountants' offices and the dispensary. To the west is the chapel, the Catholic church, and the nurses' home with cloister, the nursing here being again in the hands of a religious sisterhood, accommodation for 115 sisters being provided, while the remaining attendants and the domestic staff reside partly in the pavilions and partly in the kitchen and laundry blocks.

MEDICAL AND SURGICAL DEPARTMENTS.

In the medical and surgical departments similar developments can be traced in the design of the pavilions, from the Moabit type to the latest at Munich III., as have been traced in the development of the block plans.

At the Moabit Hospital, Berlin [fig. 15], the pavilions consist simply of a large ward for 30 beds, with, at the entrance end, opening from a central corridor, a nurses' room, ward kitchen, linen-room, bath-room, and water-closets. This type was further developed at Friedrichshain, Am Urban Berlin, Hamburg Eppendorf, and Nuremberg.

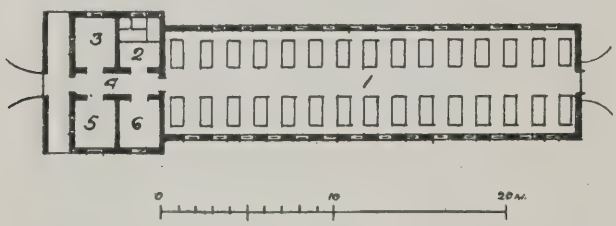

Fig. 15.—Ground Floor Plan of Pavilion, the Moabit Hospital, Berlin.

1, Ward for thirty beds. 2, Bath and Water-closets. 3, Linen. 4, Corridor. 5, Nurse. 6, Ward Kitchen.

Fig. 16 shows one of the one-story pavilions at Nuremberg for medical or surgical cases. The long axis runs from north to south. The patients are brought in the ambulance-wagon to the entrance, adjoining which are the small wards and the nurses' rooms. These rooms are disconnected from the large ward by a cross-corridor, which contains a slop sink, linen and clothes cupboard, telephone, and alarm-bell indicator. The large ward contains 32 beds ranged on either side, there being in addition to the usual ward furnishings two fixed double marble lavatory basins for the doctors', nurses', and patients' use. At the opposite end of the large ward is the day-room, from which double doors lead to the grounds by a ramp down to facilitate the food-wagon service to the ward kitchen, which adjoins the day-room, as it is here that the convalescent patients take their meals. The sanitary rooms are also situated at this end and comprise the bath-room and the cross-ventilated water-closet-room, which contains four water-closets and a slop-sink. In the basement is a store-room, and the rooms for the heating and ventilating apparatus.

This type of plan for a detached pavilion has now been largely superseded by the type

introduced by Lenharz and Ruppel at Hamburg St. Georg in 1899, of which the Virchow pavilion is a development. Instead of providing one large ward for 32 beds, two wards each for about half that number are provided, the staff and service-rooms are placed in the centre, and the small wards and sanitary-rooms at each end.

The Virchow pavilions are all similar in design and are of one story with a two-story central block. The long axis runs from north to south and the length of the pavilion is 301 feet.

Fig. 17 shows a complete plan of the ground floor of one pavilion with all equipment. Patients enter at the centre through a small room, which contains the registration-desk, into the receiving-room, where they are undressed, examined, bathed, and dressed in hospital clothing, their own clothing being conveyed to the central clothes-store where it is kept until their discharge. Adjoining this room is an operation-room for minor operations and surgical dressings. The other rooms in the central block comprise the doctors' room for testing and laboratory work, the linen-store, the ward kitchen to which the food is brought to the service entrance and handed in through the hatch, the nurses' duty-room, dirty-linen disinfection-

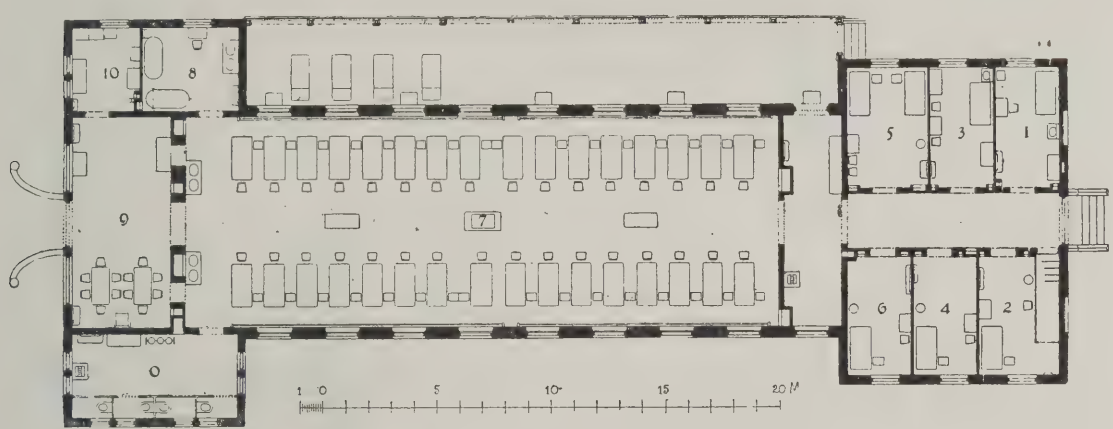

Fig. 16.—Ground Floor Plan of Pavilion, Nuremberg General Hospital.

1, 4, 6, Single-Bed Wards. 5, Two-Bed Ward. 2, 3, Nurses' Rooms. 7, Ward for thirty-two beds. 8, Bath Room. 9, Day Room. 10, Ward Kitchen. 0, Water-closets and Sink Room.

room, day-room, and staff lavatory. The large wards [fig. 18], which each contain 20 beds, are disconnected from the central block by cross-corridors, which give access to the terraces. It will be noted that by means of the through and cross-corridors the whole or any portion of the pavilion can be thoroughly ventilated. In the end blocks are two-bed and single-bed wards, the lavatory with three basins, bath-room with two baths, douche spray, and two sitz-baths, two water-closets, and the sink-room.

On the first and roof floors of the central block are the apartments for the staff of each pavilion, medical, nursing, and domestic, and in the basement the heating and ventilating-rooms.

In spite of the care which has been exercised in the planning of these pavilions their design has been much criticised, particularly with regard to their great length, the number of small rooms, the distance of the small wards from the service-rooms, the curved form of the ceiling in the large wards and the smallness of the windows.

Of greatest interest from the English point of view are those hospitals in which the pavilions are united by connecting corridors.

Fig. 19 shows the two pavilions for men in the surgical department at the West End

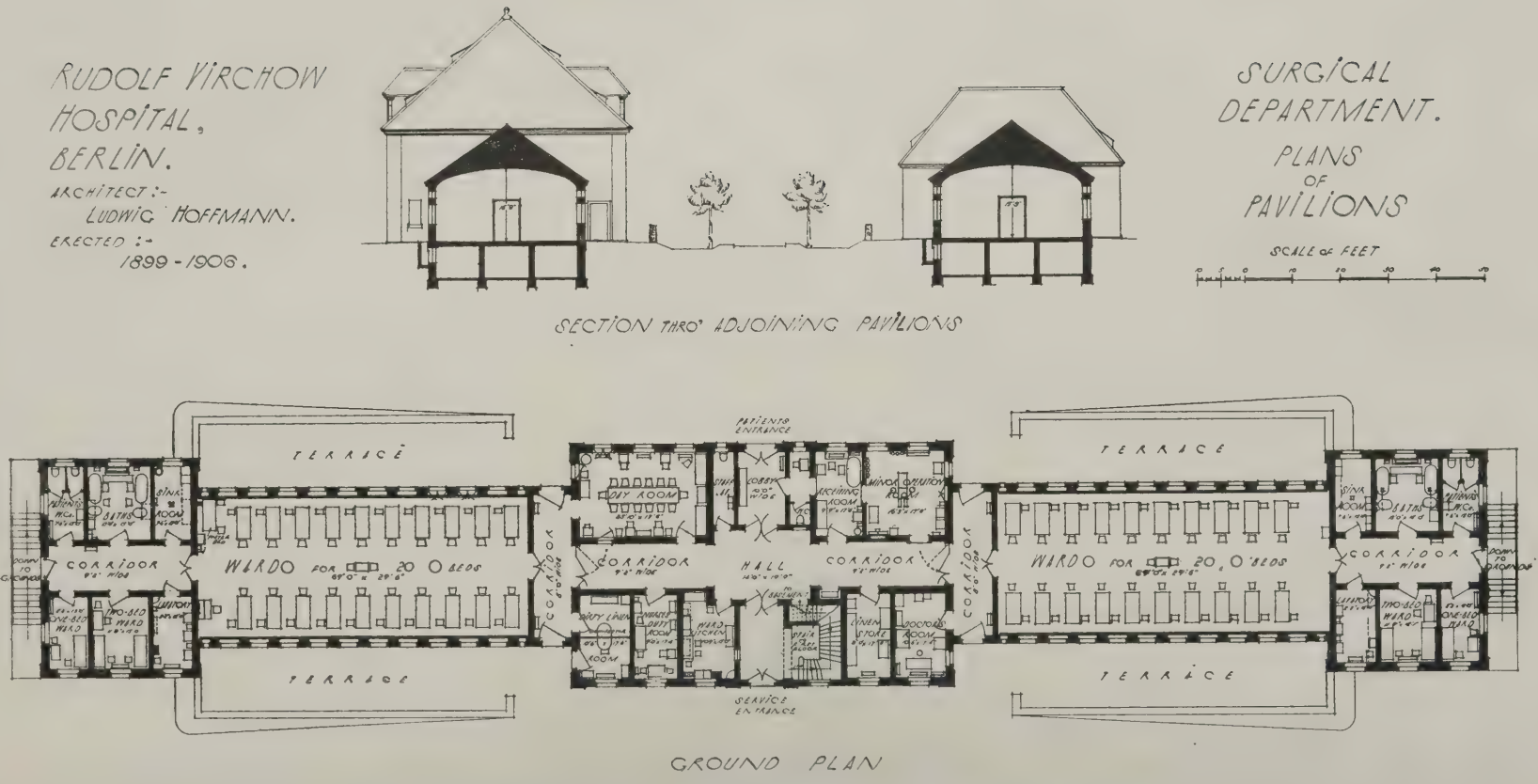

Fig. 17.—Ground Floor Plan of Surgical Pavilion, the Virchow Hospital, Berlin.

Hospital, Charlottenburg. The one-story block between the pavilions contains the receiving-rooms, to which all patients are brought, the laboratories for the two pavilions, and the day-room for the smaller pavilion. All patients are here examined, bathed, dressed in hospital clothing, and then conveyed to their ward.

The pavilions are of two stories of wards, with an upper floor to the front containing the apartments for the doctors and male attendants, and a similar floor to the rear containing the apartments for the nursing staff of each pavilion. The various series of rooms on each ward-floor are separated one from another by cross-ventilated corridors. To the front, adjoining the main entrance and staircase, are the staff and service rooms, comprising the doctors' and

Fig. 18.—Ward for Twenty Beds, the Virchow Hospital, Berlin.

nurses' duty-room, linen-store, ward kitchen, to the window of which the food is brought, and scullery; in the centre is the large ward for 22 beds, with the bath-room and lavatory adjoining; to the rear are two three-bedded wards, a single-bed ward, and bandaging and sterilising-rooms; while the rooms common to both sets of wards are placed between them, and comprise a large day-room, the water-closets, and sink and disinfecting-rooms, with provision in the latter for sterilising the fæces before discharge into the drains, and for disinfecting the dirty linen before its conveyance to the laundry.

The smaller pavilion is similar in detail to the larger, except that the large ward contains 16 beds only, while some of the rooms are rearranged owing to the omission of the rear block so as not to interfere with the lighting and ventilation of the operation-house.

At Cologne Lindenburg [fig. 20] the corridor type of pavilion is approached, the large

ward, which in five of the pavilions contains 14 beds and in the remaining three 20 beds, only taking up a small proportion of the total length. The pavilions are of two stories of wards, with the doctors' apartments and clothes-stores on the second floor. At the entrance, adjoining the main staircase and bed-lift, is the receiving bath-room, in which all new patients are bathed before admission to the wards. This receiving bath-room only occurs on the ground floor, its place being taken on the first floor by a small isolation department for two beds. The small wards are for one, two, and six beds respectively, between them and the large ward

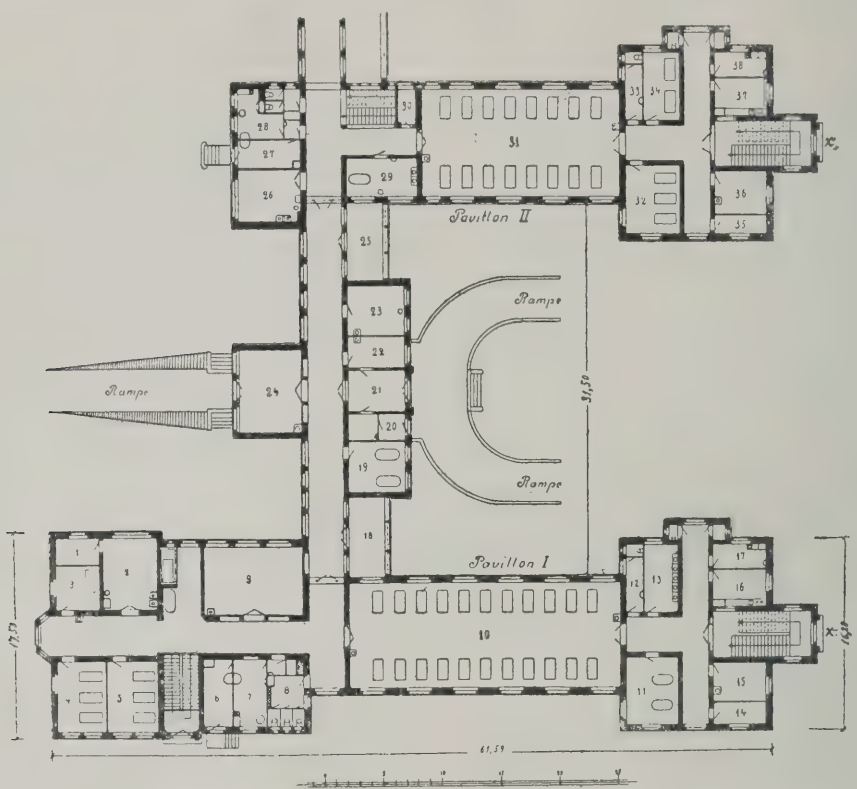

FIG. 19.—GROUND FLOOR PLAN OF PAVILIONS I. AND II. OF THE SURGICAL DEPARTMENT, CHARLOTTENBURG WEST END HOSPITAL.

PAVILION I.—1, Sterilising Room. 2, Minor Operations. 3, Single-Bed Ward. 4, 5, Three-Bed Wards. 6, 7, Disinfecting and Sink Room. 8, Patients' Water-closets. 9, Day Room. 10, Ward for twenty-two beds. 11. Bath Room. 12. Cleaner and Staff Water-closet. 13, Patients' Lavatory. 14, Linen. 15, Duty Room. 16, Ward Kitchen. 17, Scullery.

RECEIVING BLOCK.—19, Receiving Bath Room. 20, Undressing Room. 21, Entrance and Waiting Room. 22, Nurse. 23, Laboratory for Pavilions I. and II. 24, Day Room for Pavilion II. 18, 25, Verandahs.

PAVILION II.—26, Minor Operations. 27, 28, Disinfecting and Sink Room. 29, Bath and Lavatory. 30, Sterilising Room. 31, Ward for sixteen beds. 32, Three-Bed Ward. 33, Cleaner and Staff Water-closet. 34, Two-Bed Ward. 35, Linen. 36, Duty Room. 37, Ward Kitchen. 38, Scullery.

being the doctors' room for bandaging in the surgical department and for laboratory work in the medical, linen-store, day-room, nurses' and attendants' rooms, bath-room, and water-closets, and the ward kitchen, the food being brought to the latter from outside. It will be seen that the central corridor is well lighted and ventilated from open verandahs on both sides. The large ward contains in a recess four lavatory basins for the patients' use and at the entrance end a basin for the use of the doctor.

At Munich III. [fig. 21] the design of the pavilions of the medical and surgical departments is of the greatest interest, the corridor type of plan being fully developed. Each

pavilion is of three stories of wards and is disconnected from the main corridor by a cut-off corridor some 100 feet long. All patients' rooms face due south and open from a corridor 10 feet wide. At the entrance to each pavilion is a receiving department comprising undressing, bath, and dressing rooms, through which all new patients pass. The wards on each floor comprise two for twelve beds, one for six beds, two for four beds, two for three beds, three for

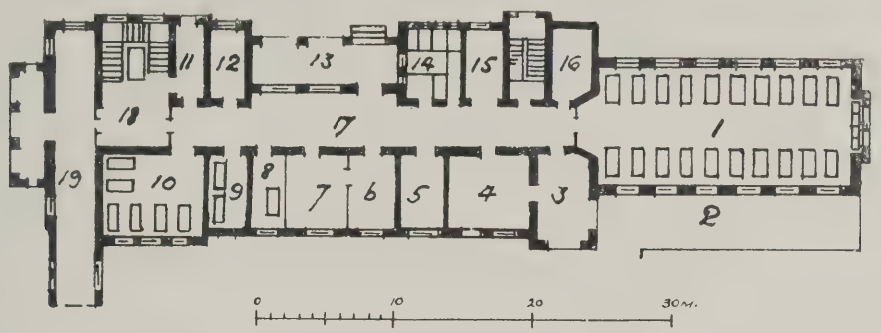

FIG. 20.—GROUND FLOOR PLAN OF SURGICAL PAVILION, THE LINDENBURG HOSPITAL, COLOGNE.

1, Ward for twenty beds. 2, Terrace. 3, 13, Verandah. 4, Day Room. 5, Bath Room. 6, Linen. 7, Bandaging Room. 8. One-Bed Ward. 9, Two-Bed Ward. 10, Six-Bed Ward. 11, Receiving Bathroom. 12, 16, Nurses' Room. 14, Water-closets and Sink Room. 15, Ward Kitchen. 17, Corridor. 18, Staircase. 19, Main Corridor.

two beds, and one single bed, each pavilion thus containing some 150 patients. The remaining rooms comprise a central day-room, ward kitchen and scullery, head-doctors' room, store-room, attendants' room with two beds, bath-rooms, and lavatories. In the central block to the north is a bandaging-room, a laboratory, dirty-linen room, nurses', staff and patients' water-closets, and in the blocks at either end a ward for permanent baths, sink-rooms with fæces disinfectors, patients' water-closets, and a store-room.

Thus a remarkable development has been traced from the one-story Moabit pavilion 1872 of the pure pavilion type with one large ward for 30 beds and four small adjoining rooms, to

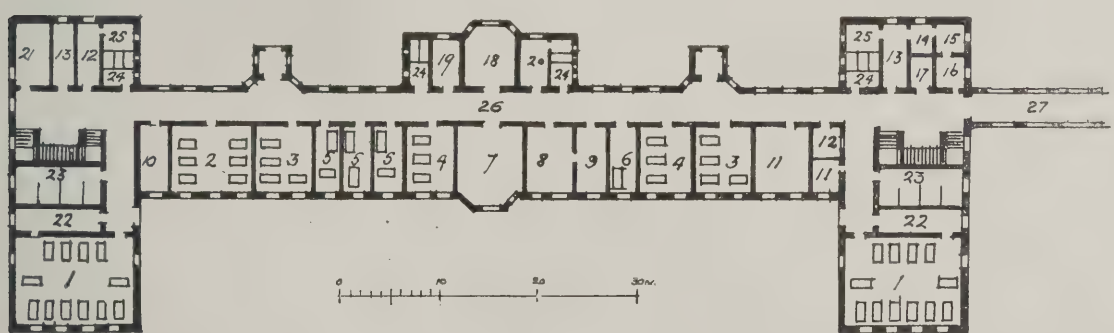

FIG. 21.—GROUND FLOOR PLAN OF SURGICAL PAVILION, THE THIRD HOSPITAL, MUNICH.

1, Twelve-Bed Ward. 2, Six-Bed Ward. 3, Four-Bed Ward. 4, Three-Bed Ward. 5, Two-Bed Ward. 6, Single-Bed Ward. 7, Day Room. 8, Ward Kitchen. 9, Scullery. 10, Nurses' Room. 11, Head Surgeon. 12, Cleaner. 13, Linen Store. 14, 15, 16, Receiving Bath Room, Dressing and Undressing Rooms. 17, Bed Lift. 18, Minor Operation Room. 19, Laboratory. 20, Dirty Linen Room. 21, Permanent Bath Room. 22, Lavatory. 23, Bath Room. 24, Water-closets. 25, Sink Room. 26, Corridor. 27, Cut-off Corridor.

the latest three-story pavilion at Munich III. of the corridor pavilion type, where the number of rooms is greatly increased, and the wards contain a maximum number of twelve beds, the majority containing six beds and under. It is considered possible that this reduction in the number of beds per ward will continue until in the next fifteen years or so the maximum number per ward will be ten beds or thereabouts, as it permits of a thorough classification of

the diseases and patients, rendering them much easier to nurse and control, while at the same time the individuality of the single patients can be much better looked after.

INFECTIOUS DISEASES DEPARTMENTS.

Separate hospitals for infectious diseases as in England are not found in Germany, but a special department is provided in the general hospital. The pavilions are grouped together and are separated by a zone from the rest of the hospital, while a separate entrance to the department is usually provided.

At the Eppendorf Hospital, Hamburg, in 1905-07, a very complete infectious diseases department [fig. 2, Infections-Abteilung] with a total accommodation of 200 beds was erected on the triangular portion of the site to the rear of the tuberculosis department, originally occupied by the epidemic department. It comprises seven detached pavilions of varying sizes, each with its own garden surrounded by a high wire-netting fence. Pavilion No. 56 is for scarlet fever, No. 58 for scarlet fever-diphtheria, No. 61 for diphtheria, No. 60 for measles, No. 65 for isolation, No. 62 for whooping-cough, while No. 63 on the outlying portion of the

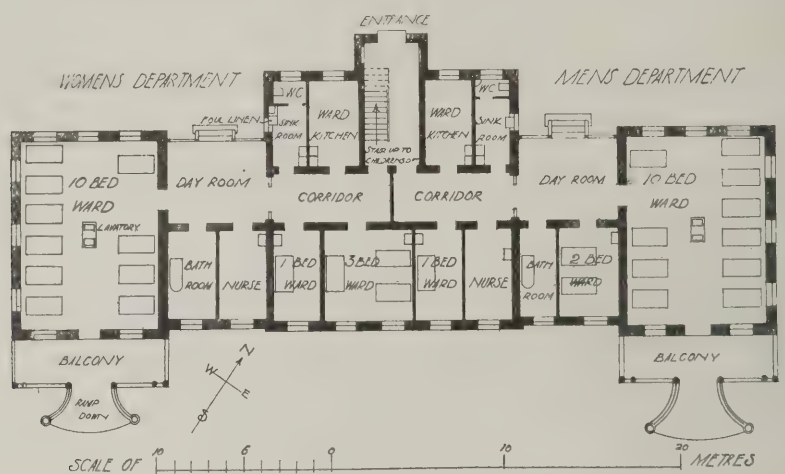

Fig. 22.—Ground Floor Plan of Scarlet Fever Pavilion, Eppendorf Hospital, Hamburg.

site is the quarantine pavilion. The nursing and domestic staff have their living and sleeping apartments in their respective pavilions.

The quarantine pavilion is of one-story and comprises three entirely separate departments with separate entrances, each containing three- and single-bed wards, with day, nurses', and sanitary-rooms attached.

The scarlet fever pavilion [fig. 22] is of two stories of wards and contains 59 beds, 13 for men, 14 for women, and 32 for children, on the second floor being the apartments for the nursing and domestic staff of the pavilion. As the plan shows, the ground floor is centrally divided into men's and women's sides, all wards facing south-east. The accommodation on each side comprises ten-, two-, and single-bed wards, day-room, nurses' room, ward kitchen, and sanitary-rooms. The first floor provides accommodation for children and is of the same type as the ground floor except that the central division is omitted.

The remaining pavilions of the department are of a similar type of plan, they being all of one story, with the exception of the diphtheria pavilion which is of two stories of wards. The maximum number of beds per ward is twelve, which is found in the measles pavilion.

At the Virchow Hospital, Berlin, the infectious diseases department is under the

control of the Royal Institute for Infectious Diseases, which is situated on the opposite side of the Föhrer Strasse, while a separate entrance from this street affords access to the department for those patients in whom the disease has already been recognised. The department comprises six detached one-story pavilions, each with a separate railed garden, symmetrically placed about the transverse axis of the hospital plan, the total normal accommodation being 138 beds, which can, however, be increased to 180 beds when occasion demands. No. 17 [fig. 3] is the quarantine pavilion, No. 18 is for diphtheria, No. 19 to the south is for typhoid fever and the rarer infectious diseases, such as small-pox, cholera, plague, etc., No. 19 to the north is for measles in one half and for erysipelas (men) in the other, No. 20 to the south is for whooping-cough in one half and for erysipelas (women and children) in the other, No. 20 to the north is for scarlet fever, while No. 21 is a special autopsy block for the department for research work.

The quarantine pavilion for the observation of doubtful cases, etc., is centrally divided for men and women, and is of the side corridor type of plan, with all wards facing south and the sanitary-rooms in outshoots to the north. The wards are for two and single beds, and the apartments for the staff of the pavilion are provided on the first floor with access from outside only.

The diphtheria pavilion with 28 beds is of a similar type of plan, the wards containing four, two, and one beds.

The four pavilions Nos. 19 and 20 are all of similar type, each containing 22 beds. They are centrally divided on the ground floor [fig. 23], each department containing five-, three-, two-, and single-bed wards, day and operation-rooms opening from a central corridor, while the ward kitchen, nurses' duty-room, dirty-linen disinfection-room, bath-room, sink-room which contains a fæces disinfector and the water-closets, are disconnected from the wards by a cross-ventilated corridor. On the first floor of each pavilion are the apartments of the medical, nursing, and domestic staffs, only accessible by outside stairs.

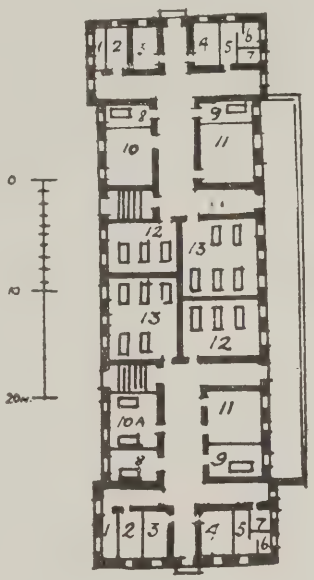

Fig. 23.—Ground Floor Plan of Pavilion for Infectious Diseases, the Virchow Hospital, Berlin.

1, Staff Lavatory. 2, Dirty Linen Disinfection Room. 3, Nurses' Duty Room. 4, Ward Kitchen. 5, Bath Room. 6, Sink Room. 7, Patients' Water Closet. 8, 9, Single-Bed Ward. 10, Operating Theatre. 10a, Two-Bed Ward. 11, Day Room. 12, Three-Bed Ward. 13 Five-Bed Ward.

At Charlottenburg West End, the infectious diseases department [fig. 5] comprises six detached one-story pavilions, placed one behind the other, adjoining the north-western boundary of the site. No. XI. is the diphtheria pavilion for 30 women and children, Nos. XII. and XIII. of the surgical department provide accommodation for 24 men, and 26 women and children respectively, and Nos. XIV., XV., and XVI. of the medical department provide accommodation for 22 men, 28 women and children, and 28 women and children, respectively.

The pavilions [fig. 24] are centrally divided into two similar departments and are of the corridor type of plan, all wards facing south-west, and comprising in each department four, three, and two two-bedded wards. Patients enter by a glazed entrance-hall through the bath-room, where they are undressed, bathed, and dressed in hospital clothing. Doctors and nurses enter from either end through a vestibule, which contains provision for the disinfection of the hands and the changing of gowns. The ward kitchen with receiving window to outside for the delivery of the food opens from the vestibule so as to be as detached as possible from the wards. Adjoining the day-room is the doctors' and nurses' duty-room, and the operation-room for septic cases, the dressings sterilisers for the latter being placed in the vestibule. The sanitary-rooms are grouped together in the central outshoot, and comprise patients' and staff

water-closets, a small room for urine and sputum examination, the sink-room which contains a cupboard for the retention of fæces etc., a slop-sink disinfector for the disinfection of the contents of bed-pans before discharge into the drains, a wash-up sink, and the dirty-linen disinfector which opens into a sorting-room with direct access to outside for the conveyance of the disinfected linen to the laundry. On the central first floor of each block are the apartments for the staff of each pavilion. Attached to the disinfection-house is a small discharge department, comprising undressing-, bath-, and dressing-rooms, for patients on discharge from this department.

In those hospitals where the site does not permit of the erection of a number of one-story blocks, each for a different infectious disease, it is usual to erect one or more large blocks of

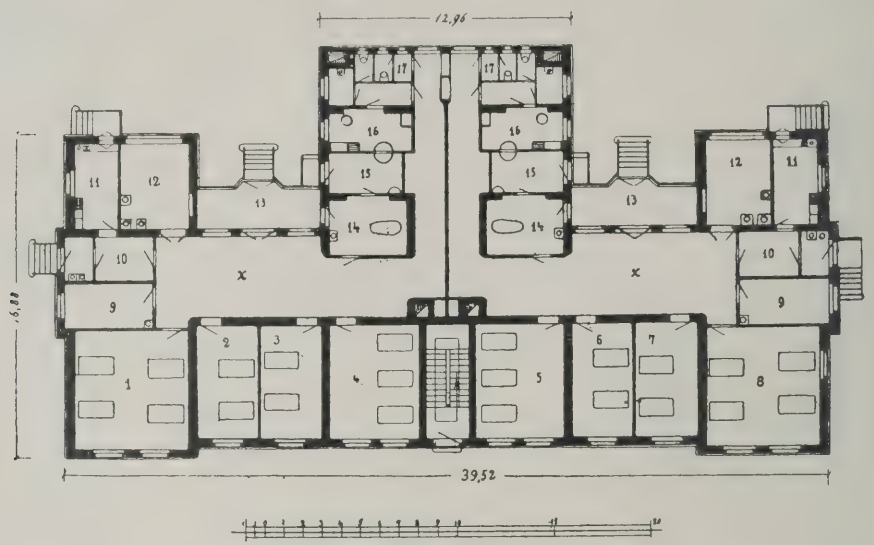

FIG. 24.—GROUND FLOOR PLAN OF PAVILION FOR INFECTIOUS DISEASES, THE WEST END HOSPITAL, CHARLOTTENBURG.

1, 8, Four-Bed Wards. 2, 3, 6, 7, Two-Bed Wards. 4, 5, Three-Bed Wards. 9, Doctor and Nurses' Duty Room. 10, Vestibule. 11, Ward Kitchen. 12, Operation and Bandaging Room. 13, Covered Entrance Hall for Patients. 14, Bath Room and Lavatory. 15, Disinfecting and Linen Sorting Room. 16, Disinfecting and Sink Room. 17, Patients' Water Closet.

more than one story, separated horizontally by the floors and vertically by partition-walls into separate departments for different diseases, each department having a separate entrance.

At Düsseldorf the infectious diseases pavilion is of three stories of the corridor type of plan. The ground floor is centrally divided into two departments, one for scarlet fever, the other for measles. The first floor, reached by a separate staircase, contains the department for diphtheria, and the second floor again, reached by a separate stair, contains the department for surgical infectious diseases. On the third floor are the apartments for the medical and nursing staff of the pavilion.

At Munich III. the infectious diseases pavilion is of two stories, and contains 55 beds in wards of from one to four beds in four completely separated departments, for measles, diphtheria, scarlet fever, and erysipelas respectively, each department having a separate entrance.

At Dresden Johannstadt there are two large three-story pavilions for infectious diseases, each centrally divided into two departments for different diseases, and by their floors for men, women, and children respectively. One pavilion contains in one department diphtheria, in the other scarlet fever, while the other pavilion contains measles in one department and the

ophthalmic department temporarily in the other. On the roof floor are the staff apartments, and accommodation for the relatives of sick children.

In the majority of diphtheria pavilions special wards are provided, which can be used as steam-rooms, as for example at Dresden Johannstadt, where the walls and floor are tiled, and the ceiling double and of arched form, so as to prevent the condensed water dropping on the patient. Fully equipped operating theatres again are usually provided in the pavilions for tracheotomy.

A special observation pavilion, of considerable interest, is found in the Düsseldorf General Hospital, where all patients with infectious diseases are received and examined, four separate departments, each comprising a ward for two beds, bath-room, water-closet, and separate entrance, being provided for doubtful cases.

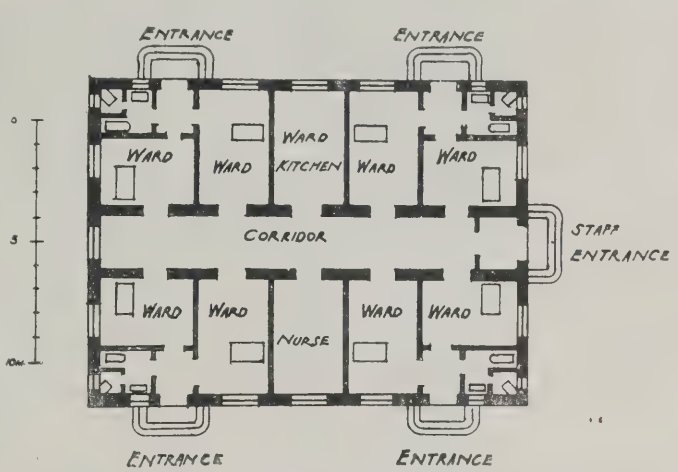

FIG. 25.—GROUND FLOOR PLAN OF THE CHILDREN'S QUARANTINE PAVILION, THE ROYAL CHARITÉ HOSPITAL, BERLIN.

The children's quarantine pavilion [fig. 25] at the Royal Charité Hospital, Berlin, shows a similar type of building with four separate departments, each with two single-bed wards, bath, and water-closet, and separate entrance, and a common ward kitchen and nurses' room, the central corridor being for the use of the medical and nursing staff only.

PRIVATE PATIENTS' PAVILIONS.

The majority of the general hospitals provide special accommodation for private patients, who pay a larger sum per day than ordinary patients, the wards containing one or two beds and being elaborately appointed. A special pavilion is usually provided for this purpose, with its own grounds and gardens. The normal type of plan consists of the series of wards lying to the south of a long corridor, while the service, treatment, and sanitary-rooms are in outshoots to the north, as at Hamburg Eppendorf and St. Georg, Nuremberg, Schöneberg, etc. At Cologne Lindenberg the pavilion is connected to the administrative block, the ground floor being for surgical cases, and the upper floors for medical. The pavilions always contain fully equipped operation-rooms and treatment-rooms.

CHILDREN'S DEPARTMENTS.

In some of the older hospitals the pavilions for children are of the same type as those of the medical and surgical departments, but in the more recent hospitals special pavilions are generally erected.

At Düsseldorf the Children's Clinic is particularly good. At the entrance is a small isolation department for four beds, so as to allow of the observation of doubtful cases and prevent the introduction of infection. The ground floor is for infants, and comprises four wards each with ten cots. In an outshoot is a most interesting department [fig. 26] of heated isolation-rooms for prematurely-born and weakly children. It comprises six cells or boxes, each for two cots, constructed in the lower portion of marble and in the upper of two thicknesses of plate-glass in nickel-plated steel frames. The elaborate apparatus for controlling

the temperature, the degree of humidity, and the ventilation of each cell, is controlled from the central corridor. Each child has its own feeding and other utensils in glazed compart-

Fig. 26.—The Isolation Department, the Children's Clinic, Düsseldorf General Hospital.

ments attached to the end of each bed. The first floor of the Clinic contains the wards for the older children, the basement a very fine milk-kitchen, with adjoining rooms, while in an outshoot are the laboratories of the Clinic, lecture-theatre, and library.

(To be continued.)

9 Conduit Street, London, W., *25th Nov.* 1911.

CHRONICLE.

Mr. Statham's Paper.

The Paper by Mr. Statham on French Sculpture drew a large and appreciative audience to the Institute last Monday. The paper was a particularly attractive one, and though it took a full hour and a half in delivery the lecturer held the interest of his audience to the end. The illustrations comprised over a hundred slides specially prepared for the occasion, the larger number from photographs very kindly supplied by the eminent artists whose works were under criticism. Two interesting speeches from Sir Wm. Goscombe John, R.A., and Professor W. Robert Colton, A.R.A., followed, and the meeting passed a very cordial vote of thanks to Mr. Statham for his lecture and (on the motion of the President) for the trouble he had taken in bringing together so large and unique a collection of illustrations. The Paper and discussion, with a selection of the illustrations, will appear in the next issue of the Journal.

The New British School at Rome.

It was announced at the annual meeting of subscribers to the British School at Rome, which was held last Tuesday in Burlington House, that, with the aid of the Royal Commissioners of the Exhibition of 1851, a scheme had been arranged for incorporating the School in a larger and more comprehensive institution, which would secure for the British nation a worthy home for the study of the Arts, Archæology, and Letters in Rome. In the room of the Society of Antiquaries, where the meeting took place, a selection of architectural and other drawings by students of the School was on view. Should the scheme for an enlarged and reconstructed school in Rome go forward, it is intended to have an annual exhibition of greater interest and importance.

Professor J. S. Reid (Chairman of the Managing Committee) presided, and the following letter, dated 15th November, was read from Lord Esher, Chairman of the Board of Management, Royal Commissioners of the Exhibition of 1851:—

"Dear Professor Reid,—Although, as you are aware, nothing definite has as yet been settled with regard to the scheme for the establishment of the new British School at Rome, I think that the time has come when it would be well to make some kind of pronouncement on the subject, and I feel that the members of your body should be the first to hear of the developments of the scheme so far as it has gone I have, therefore, prepared a Memorandum which, if communicated to your members at their annual meeting on the 21st inst., would, I think, indicate fairly clearly to them the development and nature of the scheme which the 1851 Commissioners are formulating with the assistance of your body and of others interested in the artistic side of the proposals.

I sincerely hope that it will not be long before we obtain from his Majesty a Royal Charter of Incorporation for the new institution, when we may regard its establishment as an accomplished fact and look forward to the great results that are eagerly anticipated by all who are interested in the higher education of the country. So long as you make it clear to your subscribers that the scheme as outlined in my Memorandum is still under the consideration of the various authorities concerned, I do not see any reason why the facts of the case should be any longer treated with reserve.

Lord Esher's Memorandum is as follows:—

Development and Nature of the Scheme.

In the early part of the year (1911) the Royal Commissioners for the Exhibition of 1851 resolved to establish a system of travelling scholarships in Architecture, Sculpture, and Decorative Painting on lines somewhat similar to those of the French Prix de Rome, and in the course of their inquiries they were advised to make the scholarships tenable in Rome. They accordingly approached the Archæological Institution, known as the British School at Rome, and arrangements were about to be made with that body for providing facilities for the Commissioners' scholars during their residence in Rome, when information was received that the site of the British Pavilion, erected from the design of Mr. Lutyens for the International Exhibition of Rome, had been offered by the Italian municipal authorities to Sir Rennell Rodd, the British Ambassador, to be used for the purposes of a British Institution of national interest.

Acquisition of the British Pavilion.

The Commissioners saw an opportunity not only of acquiring a building for the use of their scholars, but also of rendering a substantial service to the higher education of this country. Accordingly, with the concurrence of the British School at Rome, they intimated to Sir Rennell Rodd that if the site in question were made over to them they would be willing to purchase and adapt the building for the purposes of an enlarged British School at Rome, which should be made thoroughly representative of Art as well as Archæology. Sir Rennell Rodd, who had in the first instance offered the site to the British School at Rome, subsequently, with their concurrence, made arrangements with the Italian Government for the transfer of the site to three nominees of the Crown—namely, Prince Arthur of Connaught, President of the Royal Commission, Lord Esher, Chairman of the Executive, and himself, Sir Rennell Rodd. Shortly afterwards Colonel Charlton Humphreys, the head of the firm of contractors who built the pavilion, and to whom it will revert at the close of the Exhibition, generously undertook to present the building to the Commissioners. Thereupon the Commissioners, with the co-operation of the British School at Rome, who throughout had acted in a liberal spirit, showing a due sense of the public interests involved, approached various

bodies interested in Art, notably the Royal Academy, the Royal Institute of British Architects, and the Royal Society of British Sculptors, with a view to enlisting their support in the scheme, and, being met with favourable replies, proceeded to the work of drawing up a draft Constitution for the new British School.

The Objects of the New School.

The object of the Commissioners in taking a leading part in the establishment of the new School is to secure the institution from sectional control. While they desire that the artistic and archæological interests of the School should be managed by experts, they consider it essential that the general control of the School should be in the hands of a committee comprising a sufficient proportion of laymen along with representatives of these interests. The full details of the Constitution are not yet completed, as the desirability of drawing into the scheme various bodies other than those already mentioned (as well as individuals who, though not themselves artists, are immediately interested in artistic education) has made the work of adjustment and division of labour within the Constitution a long one.

As to the objects of the new School, it is intended to provide a centre in Rome where advanced students of Art and Letters may carry further those studies on which they have been engaged in the art schools and Universities of this country. Existing scholarships in Art enable a student to travel abroad for a short time and gain what inspiration he can from brief periods of study in the great art centres of the world. But it is of the greatest importance that a student should be able, by prolonged study in the atmosphere of a great art centre, to gain a thorough knowledge of the principles underlying the work of the great masters, and by that means to prepare himself for original work in the domain of art he has chosen. Such an opportunity for study and research in Archæology and History is already present in the existing institution at Rome, and the union of these two forces—Art and Letters—is not the least important feature of the new scheme. It is essential that some measure of guidance and supervision should be available for the students during their residence abroad, and it is the object of the School to meet these needs rather than to be in any sense a teaching institution.

The Commissioners propose to award three scholarships annually, one in Architecture, one in Sculpture, and one in Decorative Painting, and as the scholarships will ordinarily be tenable from two to three years, there will be from six to nine scholars of the Commission always in residence. The School will, however, have accommodation for students holding scholarships in the gift of the Royal Academy and the Royal Institute of British Architects and other bodies, as well as for students of Art and Archæology pursuing their researches in and about Rome.

Provision of a Hostel.

The Commissioners believe that a hostel is an essential part of the scheme. Living in Rome has of recent years become more expensive for young students working alone, and it was one of the objects of the Commissioners in promoting the scheme to relieve their scholars from material worries of any kind. The living accommodation at the hostel will be necessarily limited, but it is anticipated that the studio, library, and other working accommodation of the building will be sufficient for as many students of Art and Archæology as may be expected to make use of it.

The first Director of the new School will be Dr. Thomas Ashby, the Director of the present British School at Rome, and Mrs. Arthur Strong will, it is hoped, continue to give her valuable services to the School as Assistant-Director under the Faculty of Archæology. It is proposed to enlist the services of eminent artists who may be able to pay occasional visits to the School in order to assist and advise the Art students as occasion arises; but from the nature of the work and the high standard laid down for the scholarships it is not at present considered necessary to provide for the permanent retention of an artist's services in the School.

Tentative Forecast of the Organisation of the School.

The supreme control of the institution will be vested in a Council consisting of about 30 members, including representatives of the Royal Academy, Royal Institute of British Architects, and Royal Society of British Sculptors, archæological representatives of the existing British School at Rome, representatives of other bodies, and also individuals likely to be specially interested in the scheme. It is proposed that a small Executive Committee appointed by the Council should undertake the general control of the School, and that the purely artistic and archæological work should be organised and supervised by committees of experts forming the Faculties of Art and Archæology. The members of these faculties will be selected for their fitness for the work to be performed without any regard to the official positions they occupy. The intention is to form a Faculty of Art that will gain the confidence and support of the artistic world as a whole, while a like result is expected in the Archæological Faculty, the members of which are appointed by the subscribers to the existing British School at Rome.

Duties of the Executive Committee.

A precise definition of the duties of the Executive Committee and its relation to other bodies is difficult to put on paper at this stage. It is assumed, however, that the Executive Committee will be the main determining authority in matters of administration. It would therefore decide, or report for the Council's decision, any question of policy affecting the School in Rome or in England, prepare the annual report on the whole School for the Council, nominate official representatives of the School for special occasions, and make arrangements for an annual meeting. It would be the central financial body receiving interest on endowments and investments and paying salaries, scholarships, and maintenance accounts. It would receive from the Faculties, and hand on to the staff in Rome for recommendation to the different Italian authorities concerned, all applications for *permessi*. It would appoint, or recommend to the Council for appointment, the officials of the School in Rome, settle the date of the terms or sessions, and authorise the absence of officials from Rome for special purposes. It would receive the Director's representations and give decisions on any more important *res domesticæ* —*e.g.*, the condition of the fabric, the rules of the School, and allocation of quarters to students of various departments.

Duties of the Faculty of Art.

The Faculty of Art would supervise the work of the various students of Art who may come to the School with existing scholarships given by such institutions as the Royal Academy, the Royal Institute of British Architects, the Royal College of Art, and other bodies, and would assist those students by drawing up courses of study which shall fulfil the conditions attached to those scholarships. It would formulate a scheme for the scholarships in Architecture, Sculpture, and Decorative Painting to be given by the Commissioners

for the Exhibition of 1851. It would be responsible for the examination of the candidates, and would nominate the successful candidates for the Commissioners' election. It would further lay down courses of study which shall fulfil the conditions attached to these scholarships and supervise the work of these scholars. It would advise the Executive Committee on all matters concerning the interests of the students under this Faculty; it would advise the Executive Committee respecting the appointments on the staff in Rome; it would further submit a report to that Committee on the work of the students for inclusion in the annual report.

It would arrange for an annual or periodical exhibition of the work done by students of the Faculty, and also possibly for the publication of the more important drawings.

DUTIES OF THE FACULTY OF ARCHÆOLOGY.

The Faculty of Archæology would carry on those researches hitherto prosecuted by the existing British School at Rome. It would continue to publish the series of volumes (Papers of the British School at Rome, Vols. I.-V.) containing researches, and also the Catalogue of the Municipal Museums of Rome on which the School has been at work for many years. It would continue to carry on topographical research and such excavations as are possible. It would, like the Faculty of Art, make representations from time to time to the Executive Committee respecting its interests in the appointments on the staff in Rome. It would continue to administer such scholarships as the Oxford, Pelham, Gilchrist, and other studentships; and it would collect funds for its archæological undertakings. It would hold an annual meeting of its subscribers, at which it would present an annual report and balance-sheet. The report would be submitted to the Executive Committee of the enlarged School to form a section of the annual report presented by that body to the Council.

The CHAIRMAN said this great project promised to give the School a new constitution, a more ample life, and a worthy home, and to unite at one centre in Rome all the interests of British students who resort there, not merely archæological interests, but those that were artistic, architectural, literary, and historical. Among the students who had been welcomed at the British School during the whole time of its existence there were many who had made art, and, perhaps, especially architecture, their study. These students had received from the staff of the School such assistance as was consistent with the burden of their own work, and the staff had been glad to have them attached to the School. Very naturally some of the leaders of the architectural profession in England had desired that there should be in Rome a residential centre, available for British students of architecture during their stay in the city. The cramped space which the existing School occupied did not, of course, permit of provision for the accommodation of such students. The Committee of the British School were conducting negotiations with the Royal Institute of British Architects, represented for this issue by Mr. John W. Simpson, Vice-President R.I.B.A., which gave good hope of a successful issue, when the Commissioners of the Exhibition of 1851 entered the field with a more comprehensive scheme for an institution which should embrace all British artistic and learned interests in Rome, as described in Lord Esher's Memorandum.

The CHAIRMAN read the following letter with regard to the site of the future School from Sir Rennell Rodd, the Ambassador at Rome, whose services in connexion with the scheme have been of the highest value :—

Any one who could have seen the site this autumn in all its beauty would inevitably have rejoiced in our prospects. Things have so changed in Rome to-day, rents are so high and grounds so scarce, that it is quite hopeless to expect to obtain a site for a School and a hostel in the centre of the old city. The new site is within easy reach of the Vatican, a couple of hundred yards from the Villa Papa Giulio, and very near the Borghese Gallery. It will be practically included in the Villa Umberto (Borghese Gardens), the most beautiful and characteristic Roman park.

It is on high ground where the air is good and sanitary conditions will be satisfactory. I can only say that our prospects are envied by everyone here. The city will spread beyond us in future, but we shall remain in a garden and park-like area, which will be essentially Roman, as anything can be in a city which throughout its history has always been changing.

Architecture at the New British School at Rome.

Mr. Reginald Blomfield, A.R.A., Vice-President R.I.B.A., in a letter to *The Times* of the 23rd inst. headed "Architecture and the New Scheme," says :—

The Commissioners of the 1851 Exhibition will have conferred a great benefit on the art of this country by the establishment of the new British School at Rome, described in your columns to-day and ably supported in your leading article, and the art that will profit by this scheme more particularly is architecture. Wisely directed, the new British School may go far to remedy certain defects that lie at the root of much of our failure in modern architecture, both in training and practice. Though there are signs of advance towards an accepted standard, our practice is still rather go-as-you-please, and, in spite of the serious attempts at reform that have been made in recent years, our schools still gravitate towards a somewhat hand-to-mouth training. It is, perhaps, impossible that they should do much more than this for the average student. Owing to the complexity of modern architecture, the schools can do little more than provide the *minimum* equipment which will qualify for practice; but the worst of it is that students are apt to rest content with that *minimum*. Little inducement is held out to them to carry their researches further, with the result that architectural scholarship in England is almost a thing of the past, and the student's intellectual and imaginative horizon is limited to the exigencies of immediate practice and to knowledge which can be directly translated into terms of cash.

The new School of Rome will give the keen and exceptional student his chance of going further. The two or three years that he will spend there will give him a splendid opportunity for the study of the higher aspects of architecture as the art of fine planning and composition in building. He will be brought into touch with the classic masterpieces of the art; in the words of Lord Esher's Memorandum, he will be able "to gain a thorough knowledge of the principles underlying the work of the great masters," and the language

of architecture as expressed in the monuments of Rome, Sicily, and Greece will become something far more real and vital than anything he can learn from pattern-books and manuals. By his close association with other students, all picked men in their way, he would find a unique opportunity of getting into touch with the other arts. Lastly, by persistent work along well-considered and consecutive lines he and his successors may establish and carry on a certain standard of excellence in design which will be the ideal at which other students left at home will aim, and may in this way help to build up again that tradition of fine design which the French have never quite lost, and which has been utterly wanting in English architecture of the last 60 or 70 years. What is wanted in our practice of architecture is not so much individuality, of which we seem to have enough and to spare, but the discipline of the art by reference to standards established by the masters of the past—standards which are generally ignored in the rush of modern practice. The School of Rome should in the future be the centre and rallying point for the best and keenest of our students, and wisely guided should take its place as the keystone of our system of training. More than one generation will, of course, be wanted to bring about such results, and, as happened over 200 years ago in the French School at Rome, there are sure to be mistakes and disappointments; but it will be a great thing to have made a start, to have taken a step which may in the future have a far-reaching influence in steadying the erratic and disorderly methods of our modern architecture.

Early Christian Art.

A course of lectures on Christian Art is in course of delivery at King's College (University of London), the introductory lecture on "Early Days of Christian Art" having been given by Professor W. R. Lethaby [*F.*] on the 8th inst.

Professor Josef Strzygowski, Professor of the History of Art in the University of Vienna, delivered the second lecture on the 22nd inst., taking as his subject "The Origin of Christian Art." He began by reminding his audience how short a time ago it was that Hellas and Rome were considered the only soil in which all the arts had germinated. After courteous acknowledgment to his British fellow-workers in the same field, he pointed out how by the fourth century Jerusalem had taken the place of the old *caput mundi*, Rome, superseding Alexandria and Antioch as a centre of art, and leading the pilgrims that flocked to it through countries in which art was more dependent on the Hellenistic-Persian culture than on that of the Mediterranean. In the ecclesiastical architecture of the East was to be found a spirit working in individual characteristic and varied type, a spirit vigorous, innovating, creative, and cogent, totally opposed to the uniformity of ecclesiastical architecture in Rome. Nor did Constantinople offer the key to the question of the change from classical to mediæval art, as Byzantium should be looked on as a mere focus where the rays of artistic inspiration from the East met. The lecturer then further developed with a mass of illustration the contention, maintained in his works, "Kleinasien," "Orient oder Rom," and "Amida," that the main channel of communication between the ancient and the mediæval world was the East. He concluded by dwelling on the manner in which Europe had set herself to accomplish her emancipation from the influence of the East in early Christian times. Her help was Nature, and then in the second line Greek and Roman art. Byzantium, it was true, had used the ancient monuments, but she was never in touch with Nature, and so her creations were not living and never developed. There were two worlds of art, the one purely decorative—that was the inheritance of Islam; the other that of Nature and human expression, that was ours now, as once it belonged to Greece, and then to old Gothic art—the true renaissance of seeing Nature. Modern art on the Continent was seeking to guide us along the old Oriental road of pure decorative form. The history of Christian art gave us a lesson of the highest value in showing how the two tendencies might be combined in a great creative movement.

The next two lectures are announced for delivery as follows :—

Wednesday, 29th November, at 5 o'clock, Mr. G. McN. Rushforth, formerly Head of the British School at Rome : "Christian Mosaics."

Wednesday, 6th December, at 5 o'clock, Professor R. Elsey Smith [*F.*], Professor of Architecture at King's College, London : "The Early Roman Churches."

The further lectures of the course, the dates of which have not yet been fixed, are as follows :—

Dr. J. Paul Richter : "The Art of the Catacombs."

Professor W. R. Lethaby : "The Classic Age of Byzantine Art and the Architecture of Justinian."

Rev. A. C. Headlam, D.D. : "Christian Churches in Asia Minor."

Miss Gertrude Bell : "The Christian Churches of Western Mesopotamia."

Mr. R. W. Schultz : "Later Byzantine Architecture."

Mr. O. M. Dalton, of the Mediæval Antiquities Department, British Museum : "Minor Christian Arts."

Admission is by ticket, issued free to all students of King's College, and to internal students and teachers of the University. For all others the fee is one guinea for the course, or 2*s.* 6*d.* for each lecture. Application should be made to the Secretary, King's College, Strand, W.C.

The Hittite Discoveries.

The Times has received a telegram from Alexandretta announcing that Professor Garstang's party has returned to Alexandretta. Important results are reported. The Hittite royal city discovered in 1908 has been completely excavated, together with the palace, temple, and fine sculptures. A royal monument and a Hittite site were discovered in the valley north of Sakgegenzi. The expedition is leaving to resume the excavations at Meroe, in the Sudan.

Lectures on Cement.

Under the auspices of the Institute of Chemistry of Great Britain and Ireland, a series of lectures on Cement is in course of delivery by Mr. Bertram Blount, F.I.C., in the Lecture Theatre of King's College, Strand. The first lecture was delivered on the 26th October, and the second will be given on the 1st December, at 8 P.M.—admission by ticket, to be obtained from Mr. Richard B. Pilcher, Registrar and Secretary, Institute of Chemistry, 30 Bloomsbury Square. The following is a syllabus of the lectures :—

General meaning of the term and its limitation in the present discourse. The principal structural cements will be dealt with, and minor adhesives of the workshop will be touched on only incidentally and illustratively, if at all. In practice this delimits the term to calcareous cements.

Historical account of the evolution of cements in this limited sense. Cement making as a branch of chemical manufacture.

Chemical reactions and physical changes involved in the production of cements and in their setting and decay.

Modes of testing, both chemical and physical, the latter including mechanical tests as ordinarily understood. Standardisation of all tests which from their nature are arbitrary, and the devising and acceptance of standard specifications. The British Standard Specification as an example.

The uses of cements and the errors which may occur from unintelligent application.

The causes of failure of structures made with cement.

The importance of the aggregate used with cement to make mortar and concrete, and the errors which arise from want of knowledge of its properties.

The necessary equipment of knowledge and training for an expert. Physical and mechanical knowledge an essential, in addition to ordinary chemical training.

The ignorance now existing of the constitution of cement as produced and when set; the admirable but insufficient work of the past, and the consequent opportunities for rigorous research in a subject of exceptional difficulty.

Proposed Extension of Public Buildings.

Notice has been given that the Commissioner of Works intends to apply for an Act authorising him to acquire, for the purposes of the extension of public offices in Westminster, certain lands, houses, &c., " bounded on the north by Horse Guards Avenue, on the east by the Victoria Embankment, on the south by the northern boundary of Montagu House and garden, and on the west by the Banqueting House, Whitehall, the Royal United Service Institution, Gwydyr House, and the approach road to Whitehall Gardens" ; for the purpose of the extension of the Patent Office, 12 and 13 Took's Court, Holborn ; for purposes in connexion with the Public Record Office certain lands, houses, &c., forming a portion of Clifford's Inn ; and extending the period limited by the Public Offices Sites (Extension) Act 1908, for the purchase of certain lands, houses, &c., in Furnival Street and Took's Court, and also of the premises of the Institution of Civil Engineers, in Great George Street, Westminster.

Ninth International Congress of Architects, Rome 1911.

A correction is required in the translation, printed in the last issue of the JOURNAL (p. 29), of Resolution 1 passed by the Congress on Subject V., " The Execution of Works of Architecture for the State and other Public Bodies." The Resolution should read :—

" That works of architecture intended for the State, Municipalities, or other public bodies, be entrusted, after competition or otherwise, only to qualified architects."

The Statutory Examinations.

Examinations of Candidates for the offices of District Surveyor under the London Building Act, and of Building Surveyor under local authorities, held by the Institute pursuant to Statute, took place on the 26th and 27th ult. Of the ten candidates admitted, the following three passed, and will be granted by the Council certificates of competency to act as District Surveyors in London, viz. :—

REGINALD SEYMOUR ANDREWS, of 103 Bow Road, Bow, E.

JOSEPH EDWARD BLUNDELL, 157 Wool Exchange, Coleman Street, E.C.

HERBERT HENRY YOUNG, 11 Tankerville Road, Streatham, S.W.

Control of Advertisement Hoardings.

A gratifying victory in the long war against the advertisement hoarding nuisance in the United States is reported from Boston. About six years ago, the city of St. Louis adopted an ordinance strictly prescribing how and of what materials billboards should be made and of what size they might be, and ordering the demolition of all which did not comply with the ordinance. The legality of these restrictions was contested, and the case was carried through court after court. The Supreme Court of Missouri has now sustained the validity of the ordinance, and by implication goes even beyond it. The Court holds that this form of advertising " may not only be regulated and controlled, but may be entirely suppressed for the public good under the police power of the State."

The *Daily Chronicle* of the 17th April last reported that an official called the Government President of Potsdam, whose example was to be followed by several of his colleagues, had taken summary steps to remove the unsightly advertisements which disfigured the course of railway lines in this district. The practice was carried to a scandalous extent and practically blotted out the scenery. A regulation was passed, requiring all the advertisements to be removed to a distance of 400 yards from the railway within a month of the order.

The late Mr. Edwin Austin Abbey, R.A. [*Hon. A.*]

At the General Meeting last Monday, the Hon. Secretary, Mr. Henry T. Hare, announcing the Institute losses by death since the last General Meeting in June, referred specially to the distinguished artist, Mr. Edwin Austin Abbey, R.A. His work, he said, was of a character to appeal particularly to architects, insomuch as it was work more or less of a decorative nature, and he was sure they all felt the Institute had sustained a very great loss in his death. On Mr. Hare's motion, a vote of sympathy and condolence was passed to the widow of the late Hon. Associate.

The *New York Tribune*, publishing particulars of the will of Mr. Abbey, states that the testator bequeathed Chelsea Lodge, his home in Tite Street, London, to the members of the Royal Academy for the use of the President of the Academy, stipulating that the house should be known as the Abbey House, and that his bronze bust by Onslow Ford, Mr. Abbey's oil portrait of his wife, and a piece by Augustus Saint-Gaudens should be placed there permanently, with all the furniture and plate in the house. The library at Morgan Hall, Fairford, Gloucestershire, was also left to the Academy for removal to Abbey House or to the students' room at the Academy, and a sum of $30,000 was set aside for the maintenance of the house. The fact that Mrs. Abbey survived her husband nullifies these bequests, but it is stated, says the *New York Tribune*, that Mrs. Abbey will observe the wishes of her husband.

The late Mr. D. G. Driver.

At the same Meeting Mr. Hare made sympathetic reference to the death of Mr. D. G. Driver, who for twenty years had been Secretary of the Architectural Association. Mr. Driver had been in indifferent health early in the summer and had been obliged to give up work and take a couple of months' rest in the country. He returned apparently quite recovered, and threw himself into his work again with all his old energy and devotion, but suddenly, without any warning, collapsed from heart failure and died on Saturday, 11th November. He was forty-two years of age, and leaves a widow and two young children. The intimate relations of the Institute with the Association brought Mr. Driver into frequent contact with the senior body at Conduit Street. His amiable qualities had won for him the highest regard there as at the Association, and his untimely death is very deeply deplored at the Institute. Mr. Hare remarked that everyone realised the serious nature of the loss the Association had sustained, and how difficult it would be adequately to fill his place. He concluded by asking the Meeting to pass a vote of sympathy and condolence to his widow and near relatives.

REVIEWS.

OLD VIEWS OF ROME.

Römische Veduten. Handzeichnungen aus dem XV.-XVIII. Jahrhundert. Mit Unterstützung der Kaiserlichen Akademie des Wissenschaften in Wien. Herausgegeben von Hermann Egger. Published by Friedr. Wolfrum & Co.: Vienna—Leipzig.

A few months ago we reviewed a valuable work of Herr Hermann Egger's, which consisted of a collection of architectural drawings by artists of various schools from the thirteenth to the nineteenth centuries. These drawings were published for the first time and were selected in order to show the characteristic technique of the master at his best.

Herr Egger has recently published another collection, no less valuable, of drawings dating from the fifteenth to the eighteenth centuries, confined entirely to views of Rome. The subject portrayed is the chief point of interest in this collection, both the technique and the artist being of minor importance, except in so far as the conscientiousness of certain artists is a guarantee of the accuracy of the drawing.

In the first volume Herr Egger publishes 115 plates by 41 artists, including such names as Natoire, Poussin, and Heemskerch. The examples are drawn from originals in Berlin, Dresden, Florence, Frankfort, Hamburg, London, Paris, Rome, Stuttgart, and Vienna. The drawings are for the most part reproduced in the original size, and are mounted on sheets of thin, loose cardboard, c. 18 by 13. A separate volume of similar dimensions contains the letterpress with a descriptive paragraph for each plate, also details as to the collection to which it belongs and the medium in which it is rendered. Each artist is also referred to in a short paragraph, and the reasons are given for the trust or distrust placed by the editor on any particular work. The letterpress is further enriched by 30 small illustrations of the works of the artists in question.

The idea of compiling such a set of views appears to have come to Herr Egger when he was engaged in cataloguing the collection of Philipp Freiherr von Stosch, who died in 1757. This collection, known as the "Stosch Atlas," forms the nucleus of that vast mass of views and plans of towns belonging to the Royal Library in Vienna. When preparing the Critical Inventory for the "Studies of Ancient Roman Monuments" Egger's attention was drawn to the lively interest Stosch took in various questions of the topography of the city. The special aim in forming this collection grew ever clearer to Egger as the work proceeded, and suggested the formation of a reference book of Roman views.

Authentic, accurate drawings of mediæval Rome are invaluable, not only for settling topographical questions, but for solving the most varied problems. And yet, out of the numerous views of Rome to be found in the various European collections, there are but few which on close investigation are of any

value for topographical or other scientific research. The pitfalls are many which lie in wait for the unwary, and only patient comparing and a sound knowledge of the history of Roman monuments and the present topography of the town can enable one to distinguish between the grain and the chaff.

The most important group of the views in Herr Egger's collection consist of those known to have been executed on the spot and hence presumably trustworthy. This group includes the conscientious drawings of Maarten van Heemskerch, who died in 1574. Numerous examples are, however, also included of untrustworthy drawings, in order that they may serve as a warning. For instance, drawings based on a sketch made on the spot, into which have been introduced fanciful and charming details, such as Natoire excelled in. Also fanciful drawings made by artists who probably never were in Italy, such as Momper's imaginary reproduction of the Island of the Tiber, Plate 62, and drawings made by artists who certainly never were in Rome, but who copied Roman subjects.

There are yet more misleading copies, executed during the period when an artist is known to have been in Rome, such as Jan Brueghel's copy of Paul Bril's original sketch of the Septizonium. As these ruins were pulled down in 1589 and Brueghel's work is dated 1594 this is manifestly not an original. Unfortunately such convincing dates are not always forthcoming.

Then again there are drawings reversed for engraving purposes. Usually reversed drawings may be recognised at once, but sometimes their peculiarity is only revealed when the attempt is made to establish the point of sight.

Again some artists are pleased to re-group monuments in order to compose a picture. Thus Jacob de Heusch, in Fig. 3, gives us an apparently faithful sketch of the Ponte Rotto, but playfully introduces into the background the dome of St. Peter's, whereas the Cathedral was well out of sight, behind him. As a last instance of misleading drawings one might mention the practice some artists indulged in, of introducing repeatedly into their pictures one particular Roman monument which had taken their fancy. Thus, in Fig. 5, we find that Frederick van Volckenbosch places Sta. Maria in Cosmedin in the midst of a Dutch landscape. This instance alone convinces one, far better than a series of arguments, of the importance due to a Classification of the Views of Rome, such as Herr Egger has so ably prepared. ETHEL CHARLES [*A.*].

REINFORCED CONCRETE.

Reinforced Concrete Construction, Elementary Course, with examples worked out in detail for all types of Beams, Floors, and Columns. By M. T. Cantell, Licentiate R.I.B.A. 8o. *Lond.*, 1911. *Price* 4*s.* 6*d. net.* [*E. & F. N. Spon, Limited.*]

In this book a successful endeavour has been made to compress into a very few pages the essentials of the necessary calculations for reinforced concrete beams and columns, the principles of mechanics, so far as they are essential, being presumed to be familiar to the reader. The result is that a great deal of information is given in 125 small pages of clear type, and the addition of an excellent index of ten pages renders it easy to find the particular detail sought.

Obviously, so brief a treatise cannot be expected to be exhaustive, but here and there small additions on one or two points appear desirable. For instance, on page 13, coke breeze, clinker and slag are mentioned as possible materials for use as aggregates in concrete. It is true that a warning is given as to the possible presence in the last two of "refuse which . . . will entirely destroy the strength of the concrete," but the risk of using them at all under ordinary conditions is so great that they are better prohibited in the generality of cases. Most of the material which (albeit improperly) passes as coke breeze should also not be referred to in a students' book without a word of condemnation.

Where so much useful matter is given, it is a pity that grammatical errors should have been overlooked. Upon page 12 the word "sufficient" is twice made to do duty for "sufficiently," and the following phrase occurs: "the steel in reinforced work being comparatively small with that required in ordinary steel construction." Again, we have, "Brick concrete . . . is damaged to a greater extent, but not as bad as granite . . . ." These and other similar blemishes should have been detected by the proof reader.

MATT. GARBUTT [*F.*].

Architects' Standard Catalogues.

The Architects' Technical Bureau, which was founded in 1907 to provide an expert staff to deal with inquiries relating to materials or fittings, also to make researches for architects and to give expert assistance in technical difficulties that arise in their practice, has presented to the Institute Library a handsomely bound copy of the first five volumes of "The Architects' Standard Catalogues" just issued by the Bureau. The work is stated to be the outcome of the widely expressed desire of members of the profession for the presentation, in a systematic form, of the particulars of specialities supplied by manufacturers allied to the building trade. The catalogues have been produced to a great extent under the auspices of the Hon. Presiding Committee of Architects, and no pains have been spared in their preparation. Details are given of the specialities of some five hundred manufacturers, and guard slips are provided for the insertion of annually issued supplements. The catalogues are presented in a systematically classified form, and by the excellent system of indexing adopted particulars of any material can be discovered at a glance. The volumes should prove of service if only as a time-saving means of obtaining information upon any building specialities required.

CORRESPONDENCE.

Architects' Responsibilities.

Briantcroft, Milford-on-Sea, Hants:
17 *November* 1911.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Having followed the correspondence in the JOURNAL on this subject, I am afraid I cannot arrive at the same conclusion as Mr. Hall does and as set forth in the closing sentence of his letter wherein he says, "With the Institute clause I know of nothing that will not allow the employer to come down on the builder for defective workmanship or material even if discovered after the (last) certificate has been granted."

This conclusion he appears to base on clause 30 of the Institute Conditions which sets forth that no certificate shall of itself relieve the contractor of liability, according to the terms of "*this agreement.*"

But what are the terms of this agreement? Turn to clause 17 and it will be seen that all the powers of the architect over the builder for making good defects are subject to a time limit. This in ordinary cases rarely exceeds twelve months, and, as I believe, more generally six months. I cannot find a single word to qualify that condition. What, then, is to happen if, after all is certified and the time limited has expired, real or even imaginary defects are found in the work by the employer? Surely he might with some sort of reason argue that the time limit was set by the architect, and that, since thereby he has no more hold on the builder, his case is against the architect. What then becomes of the last clause in Mr. Hall's letter?

I have no doubt he is much more qualified to give an opinion than I am, but, all the same, it seems to me that, as the conditions now stand, the architect is liable at any rate for vexatious and probably expensive legal proceedings at the hands of an unscrupulous or litigious client. What with clients who don't understand plans, clients who have impossible fads, and clients who think that by engaging an architect they are protected against all the mischief an unprincipled builder will make when he has, to their great satisfaction, undertaken work at 20 or 30 per cent. lower than a reasonable price, we have enough to do and bear.

And it does seem, therefore, the very "last straw" that an architect should be in any sense liable for the delinquencies of a builder after using every reasonable means to protect the employer therefrom.—Yours faithfully,

W. RAVENSCROFT [*F.*].

27a Sackville Street, Piccadilly, W.:
22 *November* 1911.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I am sure all practising architects will be thankful to Mr. Edwin T. Hall for his letter on this subject in the last issue of the JOURNAL. It is some relief to hear that he thinks the Statute of Limitations applies; but even if this is so (about which there appears to be some doubt), my contention is that architects should not saddle themselves with other people's responsibilities at all.

I am pleased to hear that the R.I.B.A. form of contract was not the one used in the Leicester Case, and that Mr. Hall considers our contract gives us the legal position we should have; but here again, I understand, there is some doubt, and I think the majority of architects will agree with me that no pains or reasonable expense should be spared in order to put this point beyond the region of dispute.

The Practice Standing Committee are giving a lecture on 18th December on a subject which will embrace this topic, when the discussion is likely to be interesting and instructive.—Yours truly,

DOUGLAS WOOD [*A.*].

Official Architecture.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—From the tenour of the President's Opening Address one would suppose that the policy of the Institute was the short-sighted one, to put it bluntly, of obtaining for architects in large private practice work that is at present done by public bodies, on the plea that it can be done cheaper and better. Is such a policy judicious? Assuming the plea to be approximately correct—though who ever heard of an architect whose costs came to 5 per cent. of the sum expended?—does the President propose that the Institute should attempt a revolution in the profession, for that is what it would amount to? Should not its policy rather be the protection of the interests of all classes of members, and by raising the status of the profession to influence public opinion in favour of good work?

To quote the Address:—"The right to use the title of Architect should be reserved for those who have obtained it as a result of a proper examination passed after an artistic, technical and scientific education," and "the title of Architect should be placed in the same rank as the titles Master of Arts, Doctor of Medicine, &c."—these are excellent aspirations, yet there must be many who, having attained to this rank, find through change of circumstances or other reasons that they will be unable to start practice for themselves. The career, or, more properly speaking, the means of livelihood, then open to a member of the Institute if he remain in the profession is either to continue as assistant to a private architect, reaching at last the goal of managing assistant with perhaps three pupils and two improvers under him, or to enter one of the public offices. It should be pointed out that the members of the architectural staffs in public offices are fully equal, in training, ability, and experience, age for age, to the majority of private architects, and, putting aside the remark that public offices can equally well design a prison or a palace, are often more capable specialists in their own

branch of design than outside architects. It may be mentioned in passing that, with a few rare exceptions, there are no private architects who would not undertake to design a prison or a palace, a Government office or a telephone exchange. A large proportion of the assistants in pub' ; offices are members of the Institute, and if the President would exert his and the Institute's influence to open up careers for members worthy of the rank of Architect he would find Architecture receive greater recognition from "officialdom." The result would be, owing to the increased authority of the architectural staff, better public work; and, through improved conditions of service, men who now prefer to struggle along as outside practitioners would enter the Government service, while competition outside would be so much lessened. Then in the end, without violently upsetting the present state of affairs and giving all public work to private architects to scramble for, the aim of the President would be attained ; there would be more work for the practising architect and better official work done for the public, in addition to which the status of the whole profession would be raised and a position of greater dignity and honour be accorded to it. W. J. Davies [*A.*].

ALLIED SOCIETIES.

Leeds and Yorkshire Architectural Society: Mr. Sydney D. Kitson's Presidential Address.—The Annual General Meeting of this Society was held at the Queen's Hotel, Leeds, on Thursday, 16th November. The President (Mr. Sydney D. Kitson, M.A. [*F.*], occupied the chair, supported by the Lord Mayor (Mr. Wm. Nicholson), and delivered the Opening Address, in the course of which he said :—

The year that has just passed has not been an important one in the history of our Society. But happy is the Society which has no history; and the object of this Society is not to make history, but to go quietly on its way, as a permanent and unpretentious guardian of the nterests of architecture and architects in this province. iIt is its business to hold a watching brief, and not to take action unless its good offices are required or its intervention is tolerably certain of success. Nothing is so harmful to a Society such as ours as undue haste in action, or the tendering of unasked-for advice which is likely not to be accepted. I therefore submit to you that it is in no sense detrimental to the Society that its name has not been in evidence in the newspapers, and I assure you that it has done a considerable amount of quiet, unseen, but none the less useful, work during the past session.

There are points, however, of a more public nature which our Council might well take in hand in the near future. Such, for instance, as a firm protest against the increase of official architecture, which is becoming a menace to practising architects, and which is costing the ratepayers and taxpayers—as was so ably pointed out by Mr. Leonard Stokes in his Presidential Address at the R.I.B.A. the other night—considerably more than if the work were put out in the fairer and more reasonable way to ratepaying and taxpaying architects. The public ought to be made to realise that they are paying more for what we may be pardonably permitted to term a worse article.

Another point which has been discussed by our Council more than once is the growing evil of builders who make their own plans with one hand and hold out their caps with the other to architects to give them work. It is a cardinal fact of elemental justice that a man cannot eat his cake and have it, and if a firm and united attitude were to be adopted by members of this Society it is reasonable to suppose that those misguided builders could be made by practical means effectively to see the error of their ways. And this brings me to the time-worn subject of Registration, a subject which requires no arguments in its favour here. I own that in my early days I was opposed to Registration, but experience has taught me to be a thoroughgoing advocate of that policy. It is unnecessary at this time of day, when every trade and profession has formed itself into a trade union, to point out the advantages which would accrue to our profession by a closer union and a sterner discipline. It ought to be impossible for an employer to bargain for a less remuneration than the modest minimum prescribed by the Institute, or for an architect to agree to such an arrangement. It ought to be impossible that architectural work should be done—and ill-done at that—by builders, plumbers, rent-collectors, and undertakers.

The Institute is moving slowly but surely towards this achievement. The policy was ably advocated, more years ago than probably he cares to remember, by one of our ex-Presidents, Mr. J. W. Connon ; and it has been endorsed, I think, by everyone else who has occupied this chair. Nearly 2,000 Licentiates have already been enrolled in the ranks of the Institute. Thus a most useful element of solidarity has been obtained in furtherance of the policy of Registration. No application for the Licentiateship will be entertained after next June, and therefore all members of this Society who are eligible and still remain outside the Institute are urged to avail themselves of the opportunity. The Council of the Institute have pledged themselves to elect as Licentiates all who are recommended by the Council of their local Society without further formality. I should be grateful therefore if any who are still hesitating in the matter would come and have a talk with me about it. The amalgamation of the Society of Architects with the Institute seems likely to be accomplished in the near future. This statesmanlike arrangement has meant self-sacrifice and the exercise of much tact and common sense on both sides. The fact that such qualities have been so fully shown in these negotiations is a guarantee for the successful termination of the campaign for the statutory recognition of architects.

All this is perhaps rather dull, but I am convinced it is of the utmost importance to the profession. The reason why in the past men have held aloof from the movement is that they felt that it would mean the embracing of all—good, bad, and indifferent—who professed architecture. It has come clearly to be realised that statutory recognition is necessary because, among other things, of the increasing and intolerable burdens which recent legal decisions, with almost impish ingenuity, continue to pile upon the poor architect. It is realised that it means the inclusion, for the time being, of some who under the more stringent tests of the future would not find a place. But it will be the part of architectural education, which has made such rapid strides in late years, to raise the standard and to weed out the unfit. And so in time, though we may not live to see it, Architecture will take her place beside Medicine as a well-organised and dis-

ciplined profession, doing a work hardly less important than that of Medicine for the benefit of the community.

The most important thing of all in connection with the profession is the provision of education. Twenty years ago architectural education outside the usual office routine of pupilage hardly existed. Much progress has been made since then, and the proposed establishment of a British School of Art and Architecture at Rome is another step in advance. Hitherto the winners of studentships have wandered, sketch-book in hand, over Europe, filling up their time, doubtless very pleasantly, but with little or no discretion or continuity in their efforts. Whether Rome at the present day is the best place for the study of living architecture is, I think, open to doubt. But if we cannot all go to Rome, it is open to all students in this province to attend the architectural school at the Leeds School of Art, where, under the direction of Mr. Coombs, a very thorough and sympathetic teaching is to be obtained.

The work sent in by our students is always an interesting demonstration of the standard of architectural education at the time. One learns what they are thinking about, what are their preferences, and what is their present idea of architectural design and achievement. This year the work is of a high quality, but there is not enough of it. Consequently the competition has been poor, although the work which has been submitted has, in nearly every case, reached a sufficiently high level as to demand and to obtain a prize. . . . .

A review of the state of employment among our members during the past year is not an inspiriting one, and we have to record the departure from the province of some of our number. Several firms of contractors, with honourable records behind them, have ceased business. The feeling of confidence that was in the air up to a few years ago seems to have died away, people are marking time and hesitating to invest money in building enterprise. Nor are the census returns of the current year for Leeds of an inspiring nature. It is not good news to hear that the population of the city is increasing now at a lower rate than it was this time a hundred years ago. There were then probably not five architects practising in Leeds, while now there must be ten times as many. There is, however, no reason why a manufacturing town should grow indefinitely, and there are many reasons why it should not. And, after all, a city which contains nearly half a million inhabitants is a respectable unit. Athens at the height of her artistic achievements; Florence, in the Renaissance, never contained so many inhabitants, and it is doubtful if the London of Sir Christopher Wren counted many more. It must be admitted that in artistic matters Leeds has not progressed during the past year. The starving of the Art Gallery, the suppression of its curatorship, and the abolition of municipal concerts may save a few hundreds to the rates, but one is tempted to think that they are economies bought at too dear a price. All who care for the few remaining buildings of an older Leeds will deeply regret the drastic treatment at present being portioned out to Red Hall. As usual the literary gentlemen have not spared us. In an ode to the Statue of the Black Prince the poet of *Punch* alludes to Leeds as "a haunt of misery and gloom," while a Sonnet in the *Spectator* has some hard things to say on the ugliness of Leeds. In a recently published Guide Book to the West Riding I find the following choice passage: "It is questionable whether any other city—except perhaps Sheffield—displays to the railway traveller such a scene of smoky hideousness as is offered to those who, descending from the Bramhope tunnel, and having left only a few minutes behind them the green and open valley of the Wharfe, look out towards the East along the filthy river Aire, from the summit of the viaduct which crosses the Kirkstall Road." These extracts do not make pleasant reading, but it is as well sometimes to see ourselves as others see us. It is inevitable that the stranger who approaches Leeds, expecting to find it a Vienna or a Paris, should be disappointed. Nor has the claim yet been made for the city that it is a health or pleasure resort. But it is a great manufacturing centre where nearly half a million people live and work probably as hard as in any other town in the world. And by reason of the strenuousness of their lives sunshine and pure air should be all the more necessary to their existence. Only recently a professor, speaking in Sheffield, told his audience that smoke was essential for the production of the best steel. But surely, as Mr. Gladstone once said with reference to another matter in a place not a hundred yards from where we now are, "the resources of civilisation are not yet exhausted." And it is difficult to believe that science could not produce the best steel by a more cleanly method if it were made worth the while of science to do so. People have grown so used to what is really a reproach to our civilisation, or they are so busy in making money, that they have come to regard our smoke-laden atmosphere with regret, certainly, but with resignation. The architect suffers from this nuisance perhaps more than any other member of the community, for the public are disinclined to put up good buildings when they know that they will be shrouded in soot within a year after erection. Recently a miniature "White City" has been growing up at the bottom of East Parade, built of a white terra-cotta of local manufacture, which has done much to brighten the neighbourhood. But this material is after all only a palliative whose use would never have been thought of but for the present atmospheric conditions of our big towns.

Town planning in our province has not yet passed out of the region of talk into that of practical politics. A very generally expressed desire has been, however, shown that the new colliery districts so rapidly growing up round Doncaster should be something better than the sordid mining villages to which we are accustomed. The Archbishop of York, the other day, said that now our municipalities had great opportunities put into their hands, and he believed that had there been more care and desire in the past to check individual enterprises by the common good they would have been able to present to the world something that was not only stimulating but something more beautiful and healthy than those amorphous streets which crawled up and down like ugly insects in the manufacturing districts of Yorkshire.

In Halifax a competition, with prizes given by the local member, has been held for the best plan for improving the laying out both of the town and suburbs. It is much to be desired that a similar competition should be held in Leeds. There seems an opportunity now, when additional municipal accommodation is so urgently needed, and when the Infirmary is embarked upon an extension scheme, that the approaches to the Town Hall —which stands, in its inky cloak, as a sort of Hamlet among the buildings of the world, bemused by its own surroundings—should be widened and improved. No street alteration of any kind has taken place here since the Town Hall was built, and surely it is high time that the setting to the fabric which our forebears wrought so well should be taken in hand.

There is now the chance for the correlation of some of the more important of our public buildings. The

obvious truth cannot be too often repeated that one fine building does not make a fine city ; but the wise grouping together of fine buildings not only doubles the value of those buildings themselves, but also provides the only elements out of which a stately city is made. In an interesting address which the city engineer, Mr. Lancashire, read to the Association of Municipal Engineers last summer upon the development of Leeds, he said "although recent improvements have resulted in the possession of many streets and buildings of which Leeds is justly proud, it cannot be argued that reconstruction is as satisfactory as construction properly planned in the first instance, even apart from the extremely heavy extra cost. One is bound to realise that, in some cases, there has been no design beyond street-widening for better travelling facilities, no motive beyond the wider streets and the better buildings which have followed the widenings ; and some of the fine new buildings have been erected where it is impossible to appreciate properly the full beauty of the architect's creation."

Now that the population of Leeds has become steady and almost stationary, and now that it is no longer needful that the owner of agricultural land at some remote distance from the city should display a notice board calling attention to his "ripe building land," the opportunity arises for a general tidying up in our suburbs. There is no longer any reason why they should resemble a miners' camp or a navvies' settlement—all barbed wire and empty tins. Because every plot in a suburban road is not built upon, it seems hard on the unfortunate people who are there that their roads should be entirely unmade and often impassable. Even now, by the exercise of some thought and by the co-operation of adjoining owners, the suburbs might be opened out from the blind alley condition in which they have so often grown up.

Probably the most important building enterprise in this neighbourhood at the present time is the city of Leeds Training College and its fleet of attendant hostels. There every care has been taken with the disposition and grouping of the various buildings; and this forethought will, I think, result in an interesting and satisfactory lay-out. There is every chance too that the suburb which will grow up around it will be carefully and effectively planned.

For the first time there is a Lord Mayor of Leeds who is connected with the building trades ; and we may rest assured that Mr. Nicholson, who is an honorary member of our Society, will do what he can to promote its best interests during his term of office. . . .

Now nothing remains but to wish you a pleasant and prosperous year. The happiest life that a man can lead is an architect's life if his interests and sympathies lie that way. And, I would add, the happiest architects are the provincial architects, for they usually have a greater range and variety in their work and have more varied lay interests than is possible to Londoners. And, to crown all, they have the open country at their back with all that it means to a man's health and spirits. Nor does it seem needful, now that a traditional style is once more beginning to emerge from the chaos of clever eclecticism, and now that opportunities for study are so much greater, that the design of provincial architects should be measurably inferior to that of their London brethren.

Professor Blomfield, indeed, in his *History of English Renaissance Architecture*, speaks of "the technical inferiority in design which has to some extent characterised the work of provincial architects since the eighteenth century." Yet, of the ten best designs which he, as assessor in the recent Manchester Art Gallery Competition, selected, seven, if I mistake not, were the work of provincial architects. And one of the selected ten designs was by the Treasurer of this Society. This occurred, mind you, in a competition calling for the highest qualities in monumental planning and design.

So, although it is quite certain that we cannot all be men of genius, we can at any rate see to it that our buildings shall fulfil the sound and common-sense requirements of Inigo Jones and be "solid, masculine, and unaffected." We can put the best that is in us into our work, play the game and mind our own business, and thus ensure happiness not only to ourselves but to those who come in contact with us.

Sheffield Society of Architects.—At the opening meeting of the winter session the President, Mr. J. B. Mitchell-Withers [*F.*], in the course of his address, referred to the approaching 25th anniversary of the Society, and said during the period that had elapsed since the Society was founded nothing was more marked than the recognition, by both branches of the profession with which they were in touch, of the power of combination and organisation for good, and the education of those who were to follow them as architects and surveyors. Touching upon the question of town planning, he said it was chiefly an economic question, and while for health's sake open spaces and airy dwellings were needful, they must not forget that the house was the shelter of the family, the home of those individuals, and must always be the chief consideration in a well-planned city or town. Wide streets with costly pavements were secondary to healthy houses and playgrounds as open spaces. So far as the city of Sheffield, the largest in Yorkshire, was concerned, he expressed the hope that the wisdom and foresight of the members of the City Council might be such that the city, with its natural and beautiful surroundings, might be fated to hold the position in their great country to which it had so rapidly risen. He expressed sorrow that the architectural classes at the University were not taken greater advantage of.—The work executed by students in the Department of Architecture at the University was inspected, and much gratification was expressed at the all-round excellence of the specimens exhibited, the improvement in the measured drawings, compared with previous years, being specially noticeable.

Birmingham Architectural Association. — At a meeting of this Society on November 3, Mr. P. Cart de Lafontaine described the French system of training architects. There was, he said, in this system a training in reasoned and logical planning. No portion of the design, they taught, should be without a distinct and logical concerned purpose, and the whole scheme must be considered as a reasoned and logical development of some definite idea. The building must, in plan and elevation, express its purpose. This logical training in architectural composition was one of the most important features of the French system. All judgments of designs in competitions were influenced by that view, and it often happened that a badly-drawn or inartistically-rendered set of drawings possessing that quality were placed much higher than an attractive-looking scheme which at first sight appeared more deserving of reward. The idea was everything. He laid particular stress upon that point because it was almost invariably assumed in England that the contrary was the case, and that a nicely-got-up scheme, with all those artistic embellishments in which their French brethren excelled, was almost certain to be

favourably viewed. If the two qualities were combined in one design, the author was certain to get attention. The amount of care and time devoted by the various juries to judging the plans must be a revelation to some of our own light-hearted prize-committees, and therein lay one of the secrets of the enthusiasm and success of the Beaux-Arts School.

Manchester Society of Architects.—At the Meeting of this Society on the 8th November, Dr. J. J. Burnet, A.R.S.A. [*F.*], who was the visitor for the evening, instead of reading a formal paper, led what was announced as an informal discussion, mainly upon points arising from an exhibition of drawings of his own work which had been on view for a few days. In opening the discussion, Dr. Burnet said that they were there that evening in a spirit of *camaraderie*. He would say that his works there shown represented genuine pleasure in solving problems placed before him by his clients. It had been his privilege to work for clients, themselves highly trained technically—shipbuilders and mechanics, who clearly enunciated the problems set before him. He also spoke of the pleasure which he had always found in travelling in pursuit of knowledge to equip him for his work. In the course of the conversation which followed, Mr. Burnet outlined the inception of the scheme of extension of the British Museum. The splendid drawings of the work provided fruitful ground for discussion, and the way in which the minutest details had been thought out was in many ways a revelation. Besides the drawings of the museum, photographs and details of many other works of Mr. Burnet were exhibited.

On the 22nd November, Mr. P. Abercrombie, of the Liverpool School of Town Planning, gave a lecture on the contrasted development of Paris and Vienna. Speaking of Vienna first, he gave plans showing the development from the old mediæval town which still remains in the centre. He explained how the old line of fortification was adapted to form the Ringstrasse, and how in laying out this street open spaces were arranged opposite to and between their public buildings. With maps of the district he showed the open belt of country well wooded and picturesque which surrounds the town and which is to be left unbuilt upon for ever. The factories were placed on the south-east of the town ; the prevailing north-west wind thus carrying away the smoke. Turning to Paris, the Roman Cross Roads had formed the basis of the modern town. In all the modern improvements both of Napoleon and Haussmann the vista had been the principal motive. In obtaining this the individual buildings were of necessity subservient to the general lines, and in this way Paris had always been more fortunate than Vienna. Mr. Abercrombie had many excellent slides of the buildings and streets.

Glasgow Institute of Architects.—At an Extraordinary General Meeting of this Institute, held on the 15th November—Mr. John B. Wilson [*F.*], President, in the chair—a subject of considerable importance not only to the profession but to the public which builds was under consideration. The increasing tendency during recent years to select an architect only after obtaining competitive plans from a greater or lesser number is looked upon as a serious burden to all engaged in this work, owing to the very large outlay involved, combined with the remote and uncertain chance of any return. The evil is increased by the fact that, owing generally to inexperience or short-sightedness on the part of the promoters, the conditions embodied in the advertisement or invitation to compete are often so unsatisfactory as to render the selection of the best design in many cases little more than a hazard, with, of course, a corresponding inefficiency as regards the building when erected. The Royal Institute of British Architects at present debars its members, under penalty, from engaging in competitions the conditions of which are considered unsatisfactory by the Council, and a similar course has been followed by several of the Allied Societies throughout the country. After prolonged consideration of the subject, the Glasgow Institute adopted some time ago in general assembly the principle involved, and the meeting of the 15th was held to consider the methods to be adopted towards carrying it out as proposed in a series of resolutions brought forward by the Council. In the course of a lengthy discussion considerable divergence of opinion was manifested with regard to some of these, and on a vote being taken it was decided by a majority to remit the scheme back to the Council for reconsideration in detail.

MINUTES. II.

At the Second General Meeting of the Session 1911-12, held Monday, 20th November 1911, at 8 p.m.—Present : Mr. Leonard Stokes, *President*, in the Chair; entered in the attendance-book the names of 32 Fellows (including 14 members of the Council), 52 Associates (including 2 members of the Council), 5 Hon. Associates, 35 Licentiates, and numerous visitors—the Minutes of the Meeting held 6th November, having been printed in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary having announced the decease of Messrs. Edwin Austin Abbey, R.A., *Hon. Associate*, elected 1905; William Forrest Salmon, *Fellow*, elected 1876, Past President of the Glasgow Institute of Architects, and sometime member of the R.I.B.A. Council; and David George Driver, for twenty years Secretary of the Architectural Association (London), it was resolved, on the motion of the Hon. Secretary, that the regrets of the Institute be entered on the Minutes of the Meeting and that a vote of condolence be passed to the relatives of the deceased gentlemen.

The decease was also announced of William Henry Hill, *Fellow*, elected 1888; James Pigott Pritchett, *Fellow*, elected 1863; George Ransome, elected *Associate* 1880, *Fellow* 1906; and John Davidson and Harry Edward East, *Licentiates*.

The Hon. Secretary having announced that Mrs. Arthur Cates had presented to the Institute a handsome mahogany cabinet containing an important collection of photographs of buildings in Italy, Greece, &c., a vote of thanks was passed to Mrs. Cates by acclamation.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President—namely, John Cooper Ainsworth and David Wickham Ayre, *Associates*; John William Abraham, Harold Oakley, Walter Snell Bishop, Eric Edwin Hodder, Raymond Sheppard, Augustus William Newman, James Arthur Chubb, *Licentiates*.

A Paper on MODERN FRENCH SCULPTURE having been read by Mr. H. Heathcote Statham [*F.*], and illustrated by a large collection of lantern slides specially prepared for the occasion, a vote of thanks, moved by Sir William Goscombe John, R.A. [*H.A.*], and seconded by Professor W. Robert Colton, A.R.A., was passed to Mr. Statham by acclamation.

The proceedings closed and the Meeting separated at 9.50 p.m.

MONUMENT TO REGNAULT IN THE ECOLE DES BEAUX-ARTS.

Figure holding up the palm by Chapu.

"Monuments aux Morts," in Père Lachaise Cemetery. By A. Bartholomé.

MODERN FRENCH SCULPTURE.

By H. Heathcote Statham [*F.*].

Read before the Royal Institute of British Architects, Monday, 20th November 1911.

WHEN my friend Mr. Spielmann gave us his interesting illustrated paper, three or four years ago, on modern English sculpture, it occurred to me that it might very well be followed, at a convenient season, by an illustrated paper on modern French sculpture. Perhaps this paper would have come more suitably, as it was first intended, at the close of the Session, since it is not a strictly architectural subject; but I was asked to read it now to take the place of another, the author of which could not be ready in time; and after all, sculpture is the art most closely connected with architecture, being, as I heard a sculptor once remark, "only a superior form of masonry." But this was said at a meeting of architects.

That some notice and illustration of modern French sculpture is not uncalled-for is evident from the fact that, as a general rule, I have found that the only name that any one knows in England is that of Rodin. I went into a well-known art-photographer's to ask if they had any photographs of modern French sculpture, and was told—"Rodin? Oh yes, we have a number"; and the same was the result at the London branch of a French photographer's; in each case they had a whole portfolio of Rodin's works, and of all the other eminent sculptors of France only some half-dozen stray photographs; and why that was, the usual law of supply and demand of course explains. As to the origin and the reason-

ableness of what I call "the Rodin craze" I have something to say just now; in the meantime I would merely remark that if people on this side of the Channel really believe that French sculpture of to-day is summed up in the works of M. Rodin it is high time they were told differently. I believe I may claim to have seen every piece of French sculpture of importance for nearly a quarter of a century back; at all events, I have seen and made notes on the sculpture of every Paris Salon since 1889. And I wonder sometimes whether those who profess to be interested in contemporary art, but who never take the trouble to visit the Salon—whether they realise what the annual sculpture exhibition at the Salon means. It means that for at least a quarter of a century back—first in the great central court of the old Palais de l'Industrie (originally built for the 1878 Exhibition); then in the vast space covered by the roof of the Galerie des Machines; lastly in the great central court of the magnificent Palace of Art built in 1900, there has been seen every year a collection of between eight and nine hundred new works in sculpture;* some of them no doubt commonplace in conception, some of them perhaps rather *outré* and violent in composition; but all, I think, up to a high standard of technical execution; and a considerable number of them, every year, representing both in conception and execution the highest style of sculptural art. I do not think the whole history of art can show such an extraordinary evidence of artistic energy and vitality as is displayed in these successive annual exhibitions of French sculpture. I have in most years had the opportunity of recording my impressions on the Salon exhibitions in one or another English periodical; and as one cannot very well remember, twenty years afterwards, what one's impressions were at the time, I should like to quote a few words that I wrote in closing a review of the Salon of 1890:—

"Taking this as a representation of French sculpture for one year, and comparing it with our little show at the Royal Academy, the contrast is extraordinary enough; and the evidence of mental vigour and power of invention as well as of execution among French sculptors is equally extraordinary. . . . In walking through the collection at the Palais de l'Industrie we are confronted by new ideas, new treatments, and new force and meaning imparted to old subjects; we are gaining new poetic conceptions of those subjects; and this not only in isolated instances, but in the case of a large proportion of the works exhibited."

If there has been a certain degree of decline in French sculpture the last few years—and I am afraid there has—still I think the impression here recorded as to its intellectual interest would be true in the main up to the present moment. It must be admitted, however, that 1890 was rather an exceptional year; that and 1904 are the two greatest years I remember in Salon sculpture. But I think I shall be able to show you enough illustrations to-night to justify the feeling expressed in my record of 1890.

Now, what do we look for in sculpture? First and pre-eminently, perfectly modelled form, sculpture being the art dealing with form only, without the assistance of colour and perspective; for even relief sculpture is not so much perspective as the superposition of two or more planes of delineation. And hence the nude figure will always be the highest effort and ambition of the sculptor: first, because there alone it is that form has to be refined to the utmost. As Browning puts it in one of his poems, when he imagines some one exclaiming—

> "'As like as a hand to another hand!'
> Who said that, never took his stand,
> Found and followed, like me, an hour
> The beauty in this—how free, how fine,
> To fear, almost, of the limit-line!"

And secondly, that the figure, delivered from the conventional bondage of costume, becomes an abstract thing, not tethered to time or place. And though mere beauty in a figure is in

* The Old Salon this year contained 868 works, the New Salon (in which sculpture is less prominent) 334, making a total of 1,202 works in sculpture produced for one year's exhibition only.

itself enough to justify sculpture, this abstract figure may also be made the means of symbolising an abstract idea, so that sculpture may in that sense become, what Matthew Arnold said poetry ought to be—" a criticism of Life." And it is for the frequent recurrence of this effort to symbolise thought that French sculpture of the modern period is, among other qualities, especially remarkable. And to furnish man with an adequate material for such abstract and symbolic form in sculpture, God created marble :—

> —" as it were
> Some clear primordial creature dug from depths
> In the earth's heart, where itself breeds itself,
> And whence all baser substance may be worked " :

so says the sculptor in *Pippa Passes*. And when his bride glances up at the model of a figure of a mediæval German Kaiser in splendid array, he says :—

> " Ah ! do not mind that ; better that will look
> When cast in bronze : "

and he was quite right; marble is too ethereal a material to be prostituted to the carving of tailoring and millinery.

The expression of abstract idea through abstract form is then the highest mission of sculpture. Beyond or below that, what possibilities are there? The actual form and presence of memorable personages, in their habit as they lived, can be commemorated in bronze, though not suitably in marble; or, which is far better, the portrait head alone can be represented, in bronze or marble, accompanied by figures symbolical of the character and career of the person commemorated, which is the favourite way with the French; and here we come round again to the abstract ideal. Sculpture may represent, also, significant facts and forms from the life of its own day, especially those which are typical rather than merely incidental; though this is a function of sculpture to be used with caution and reserve, lest it should degenerate into mere realism and playing to the gallery. Of all these varied functions of the art of sculpture you will see examples in the illustrations I have to show you.

I am dealing chiefly with the French sculpture of the last twenty years, but we may begin a little earlier by noting that it was in 1874 that respectable middle-class persons, coming up from the country " to see the Academy," were startled and probably shocked by the terra-cotta group of Carpeaux' " La Danse," now executed in stone on the front of the Paris Opera House. I do not altogether admire it : it is too violent for architectural sculpture; but it is a remarkable example of the intensity of the French genius in dealing with a subject; if dancing was to be symbolised, it should at least be the very *abandon* of dancing; there is a clash and fury about it that always reminds me of the *finale* of Beethoven's Seventh Symphony. Another name of the same period is that of Barye, who may be called the Michelangelo of animal sculpture, and whose monumental treatment of animal forms suggests the idea of Blake's drawings of animals* done into bronze. It is surprising how few people in England seem to know the name of Barye, but he was a power in his day, both in his art and his character. There is a story of Thiers, when he was President, calling to inspect an eagle by Barye, and finding fault with the action of the talons; he was proceeding to show with his own hands how it ought to be, when he was cut short with—" Enfin, M. Thiers, vous n'êtes pas un aigle "; a sarcasm to which Thiers' feeble presence lent rather a cruel personality.

Coming to the period we are including, the last twenty years or so, we have first to name some of the eminent men of the period who are no longer living. Of these the highest probably is Chapu, a sculptor of no little power, as his fine figure of " Courage " shows

* See the marginal drawings in the *Book of Job* series.

(Salon, 1887), and of a refinement and reserve that are beautifully illustrated in his figure of Jeanne Darc* as a country girl, which was in the Franco-British Exhibition. It was Chapu, too, who modelled the graceful figure holding up the palm in the monument to Regnault in the Ecole des Beaux-Arts. Chapu executed a good many memorial sculptures, generally treated with a single figure in relief symbolical of mourning, and showing the greatest refinement both of feeling and execution; in this kind of subject his mantle seems to have fallen on M. Mercié, whose works of this class have a good deal of resemblance to those of Chapu.

"Juno." By Falguière.

Ernest Barrias, a less refined but perhaps more robust artist than Chapu, has left remarkable works of various type; some very fine classic figures representing the arts—two in the Hôtel de Ville, and one in the Palais des Beaux-Arts are, I think, his; and he produced a large and effective work in his monument to Victor Hugo, who is represented seated on the summit of a rock, a reference, no doubt, to his exile in Guernsey—as Swinburne says in his splendid poem—

> "All thy great fame and thee
> Girt by the dim strait sea,
> With multitudinous walls of wandering wave."

If the figures blowing trumpets are a little bombastic—well, the genius of Hugo was a little bombastic also. The "Défense de Paris," by Barrias, is one of the works called forth by the 1870 war, a group half realistic, half symbolical; the finest point in it is the figure of the child, in the back view, sheltered behind the cannon. Barrias' appreciation of the finer decorative and expressive qualities in sculpture is, perhaps, nowhere better shown than in his beautiful figure representing "Architecture" (Salon of 1893), forming the memorial figure over the grave of an architect.

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* I take the opportunity to enter a protest against the absurdity of spelling it "d'Arc," as if she were a lady of family; whereas she was simply "Jeanne Darc" (*Anglicè* "Jane Dark"), a peasant girl. Balzac writes it "Darc," but most French and English authors persist in making it "d'Arc."

Paul Dubois is a name to be remembered, if only for his masterly and spirited equestrian statue of Jeanne Darc; and Dalou, who was driven out of France by the war and lived in London for some years, was at one time better known here than French sculptors have generally been known in England. In the Academy of 1877 his charming terra-cotta group of a French peasant woman with her infant at her breast attracted general admiration, and even led a friend of mine to speculate as to how many marriages would result that season from its suggestion; and here for once Dalou was simple and natural. His great work, in every sense, is the colossal bronze group of "The Triumph of the Republic," which few visitors to Paris ever see; it stands on a kind of island in the middle of an oval pond in the square called the Place de la Nation, at the extreme east end of Paris, only to be reached by a pilgrimage along the Faubourg St. Antoine and other historic streets of proletariat Paris. As a group of great power and on a very large scale, it is worth the journey; but Dalou was a somewhat over-rated sculptor, his work being too boisterous and wanting in repose and reserve; in such works as this and his "Triumph of Silenus" he seems to revel in creating a crowd of figures in violent action; and in his monument to Delacroix, which stands in the Luxembourg gardens, "Time bringing Fame to Delacroix," the spectacle of the figure of Time rushing up to the bust of Delacroix with a large nude young woman in his arms, borders dangerously on the ludicrous.

A much greater name among the deceased artists of the period is that of Falguière, who during the latter years of his life was tacitly regarded as the leading French sculptor, and from whose atelier came a large number of the most eminent sculptors of the younger generation. His "Junó" with the peacock is one of the grandest nude figures that sculpture has produced; it appeared in the Salon of 1890 under the title "Femme et Paon"; a year or two after he exhibited the same group as a painting under the title "Juno." Not only is the figure so fine, but the modelling of the peacock's tail is a masterpiece of broad execution, indication of texture and material without any minute realism. His "Diane," watching the effect of a shot from her bow, exhibited a year or two later, is an almost equally fine nude, apparently studied from the same model. But Falguière was equally great in portrait figures, of which his seated figure of Corneille is one of the best examples.

Then we come to a great painter who in the latter part of his career took up sculpture—Gérôme, who died a few years ago at a great age, the last survivor of an interesting group of French artists who impress one as being more like soldiers than artists; you can see a characteristic portrait group of them in Armstead's basrelief at the base of the Albert Memorial (at the north-east angle). Gérôme represents a type more often found in French art than elsewhere: the union of great technical power with the total absence of poetry or sentiment. He was as exacting as to technique with himself as he was with his pupils, whose best efforts never elicited any more exuberant praise than "Pas mal," but he never produced a single work that appeals to one's heart or feeling. Consequently, when he took up sculpture, it was to try brilliant experiments in form and technique; some of you may remember his "Bellona" in bronze and ivory, exhibited at the Academy in 1893, having figured in the Salon of the previous year. "Tanagra," "Corinth," "Pygmalion and Galatea," were among his productions in sculpture, mostly either in tinted marble or in polychromatic materials; all of them supremely clever, none of them beautiful. His equestrian statuette in bronze of Napoleon in Egypt, "General Bonaparte" as he was then, is one of the most satisfactory of his sculpture works, for there he was exactly in harmony with his subject; it was in the Franco-British Exhibition.

Turning to the living sculptors, there can hardly be a doubt that M. Mercié has the claim to be considered at the head of the list, both for the vigour and the versatility of his genius. He can do everything, and can do it all equally well. His figure of Jeanne Darc

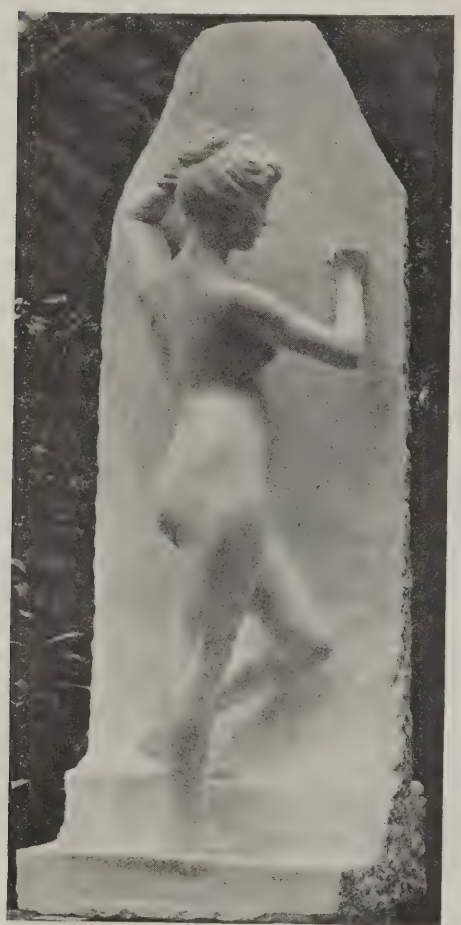
"Gloria Victis," at the Paris Hôtel de Ville. By Antonin Mercié.

in armour, in the Domremy memorial, is one of the finest imaginable representations of warrior and saint combined. His nude "David," sheathing his sword after beheading the Philistine, may be paired off with Donatello's "David" at Florence; it is the finer of the two, for it is more decorative in line. "La Liberté dans l'Art," a nude figure with a palette in one hand and stretching up the other hand with a fine free action, was his principal contribution to this year's Salon, and may be taken as typical of his own claims. "Souvenir," a draped figure seated on a tomb, exhibited in 1885, is the type of another class of works, in which, as before remarked, he seems rather to follow the lead of Chapu. A commission from the Comte de Paris, in 1886, led to his producing a marble group of Louis Philippe and his Queen in royal array, a commission he probably did not much enjoy, but he succeeded in the difficult task of imparting dignity to the figure of the "Citizen King." In quite another manner is "Quand Même," one of the works arising out of the war, showing a woman taking the musket from the hands of a dying soldier to continue the fight. In an angle of the Rue de Rivoli, very unsuitably placed, is his monument to Alfred de Musset, an illustration of the beautiful poem "Nuit de Mai," where the poet describes himself as sitting in dejection in a garden and his Muse appearing to console and encourage him. The figure of De Musset in ordinary dress is unfortunate for sculpture, but the poem could hardly have been illustrated otherwise. Lately M. Mercié has pleased himself occasionally by subjects of rustic life: "Le Départ du Village" and "La Bourrée," the old French dance, danced by a peasant girl in sabots to a hurdy-gurdy accompaniment. But perhaps the finest of all Mercié's works, in conception and execution, is the group called "Gloria Victis" which stands in the centre of an open court in the interior of the Hôtel de Ville. Paris was rebuilding her Hôtel de Ville after the most terrible military reverse that a great country ever suffered; one could hardly put up anything triumphant, so he shows a great winged angel bearing home the dying warrior who had done his best in the fight. There is a great and noble idea in this. M. Mercié has also taken of late years to painting, with equal success; his small classic pastorals of nymphs and woodland are generally among the most beautiful things to be found in the picture-galleries of the Salon. If ever there was an "all-round" artist, M. Mercié is one. He, like so many others of the eminent sculptors of to-day, was a pupil of Falguière.

"Dans le Rêve." By Gustave Michel.

M. Gustave Michel is one of the most prolific of French sculptors, all of whose work is thoughtful and highly finished. His "Dans le Rêve," in the Salon of 1898, a standing semi-nude figure with a dreamy expression, is a fine example of the effect of pure beauty

of form. In "L'Aveugle et le Paralytique" (1896) and "Le Soir de la Vie" (1901) he appealed to us not so much by beauty of form as by the human feeling embodied in these works—the type which we may call, in the phrase already quoted, "a criticism of life." Then there are two very fine sculptors of the same surname, Alfred Boucher and Jean Boucher, who are often supposed to be brothers, but are in reality no relation; to prevent confusion Jean-Boucher has recently hyphened his name, and appears under J. in the Salon catalogue. Those who saw the Franco-British Exhibition may remember Alfred Boucher's "La Terre," a colossal nude figure of a man digging; one of the most powerful works in that collection; but he has produced works of a very different stamp. How would one expect "The Philosophy of History" to be symbolised in sculpture? Alfred Boucher represented it (Salon of 1898) not by a robed sage but by the nude figure of a young girl, with a serious face, writing on a tablet before which she stands. This, which was executed in a blue-grey marble, is a work of peculiar charm in its fanciful and graceful symbolism. Another exceedingly fine work, exhibited in the Salon of 1907, is "La Pensée," a heavily draped seated figure shading her face with her hand. To Jean Boucher I shall refer again later on. One of the most imaginative of French sculptors is M. Denys Puech (pupil of Falguière and Chapu), whose group, "La Sirène," now in the Luxembourg, was one of my earliest acquaintances in modern French sculpture, in the Salon of, I believe, 1889. What distinguishes this is the amount of thought and expression put into what in other hands might have been a mere piece of conventional classicism; but here the youth carried away by the Siren is so human in his expression of wonder mingled with apprehension as to give quite a new interest to the subject. Puech's basrelief of a recumbent nude figure representing the Seine, with the towers of Paris as a background, is an admirable piece of decorative work; but one of the finest things he has done is "The Muse of André Chénier." Chénier was a poet of singularly delicate and refined genius, who had the misfortune to be tumbled into the middle of the hideous orgies of the Revolution, and the imprudence to write a poem in praise of Charlotte Corday and in detestation of Marat. Naturally, he was guillotined, and Puech's group shows the kneeling Muse pressing tenderly to her bosom the poor severed head of the poet. It is one of the most touching and pathetic productions of modern art.



"The Philosophy of History."
By Alfred Boucher.

The treatment of subjects from classic antiquity has very largely occupied the talents of M. Jean Hugues, one of the ablest and most virile sculptors of the day. His great decorative fountain illustrating the legend of "Les Danaïdes" occupied a central position in the Salon of 1903, where it attracted general admiration. Among his other works founded on classic legend are his fine and dignified figure of "Œdipus at Colonos," and his great group of "Laocoön," in which he succeeded in giving quite a new force and interest to a subject

familiar to every one in the more conventional treatment of the well-known Roman work. His "Muse de la Source," a nude figure seated, with one knee drawn up, on the edge of a marble cistern, is one of the grandest nude figures in modern sculpture; it was exhibited in the Salon of 1894. In the same category of works founded on classic legend may be named the remarkable group "Perseus Killing the Gorgon," by M. Marqueste, in the Salon of 1890. M. Marqueste, another of the distinguished pupils of Falguière, is a sculptor all of whose works show great vigour and a grand sculpturesque style.

Among works which may be quoted as expressions of a moral significance there are few finer than the "Exilés" of M. Maturin-Moreau. The upright figure of the old man, his head bent down with an expression of mingled grief and indignation, is finely contrasted in line with the nude figure of the son, who stands by and endeavours to console him. It is a work which, once seen, leaves its impress on the memory for ever after.

"La Muse de la Source." By Jean Hugues.

Turning to the work of M. Vital-Cornu we come back to the region of pure beauty of form, as seen in his fine nude figure "La Nature s'éveille" (Salon, 1901), and in the beautiful dreamy reclining figure entitled "Douces Langueurs" (Salon, 1898). These belong to a class of works which make their mark not on account of any meaning they convey, but from sheer physical beauty, which, as before remarked, is in itself sufficient to justify sculpture—

> "If you get simple beauty and nought else,
> You get about the best thing God invents." *

M. Frémiet, one of the most successful and conspicuous French sculptors of the day, does not care to appeal much to our sense of beauty; one of his works, indeed, which appeared at the Salon a good many years ago, a gorilla carrying off a nude woman, was at once one of the

* Browning's *Fra Filippo Lippi.*

most powerful and one of the most brutal things I have ever seen in sculpture; had it been exhibited in London there would have been a public outcry against it. It is regrettable to be compelled to admit, in speaking of a nation of such artistic genius as the French, that subjects of cruelty and brutality in art do not seem to shock them as they shock us, provided they are powerfully executed in the artistic sense; the picture galleries of the Salon show only too many instances of this, and two of the most brilliant painters of the last century, Gérôme and Decamps, were among the worst sinners in this respect. Frémiet's gorilla, however, was in his case an exceptional work; his chief successes have been in equestrian portraits of celebrated personages, of which he has produced a number of fine examples, one of the best and most celebrated being the figure of Jeanne Darc, which stands in the centre of a wide street opening out of the Rue de Rivoli.* A characteristic production of his, is the bronze equestrian statue of a mediæval "Héraut d'Armes," which forms the lamp-standard on a landing of the grand staircase of the Hôtel de Ville, the herald's upright spear carrying the light. The horse is rather an unhappy-looking animal, probably by intention; in general the horses in Frémiet's equestrian portraits are very fine; in this case he seems to have thought that the average cavalry horse was more in keeping with the subject. Artistically I think this was rather a mistake, and spoils the effect of the work.

"Les Exilés." By Maturin-Moreau.

It was either in 1892 or 1893 that I noticed, among the not very numerous sculpture exhibits in the New Salon, the group representing the nude figures of a man and woman, with their backs to the spectator, looking, as it were with apprehension, into the dark doorway of a tomb. There was something so original and so impressive in this work that I at once thought: Here is a new sculptor of genius. It was in 1895 that the sculptor, M. Bartholomé, exhibited at the New Salon the great completed work, the "Monument aux Morts," of which

* In this case the figure of the heroine, in the first instance shown as a beautiful girl, was afterwards remodelled, the sculptor having apparently come to the conclusion that she was more probably a young woman

the door with the two figures in it formed the centre; and almost immediately received a commission, either from the State or from the Paris municipality (I do not know which has charge of the cemetery), to carry it out in stone as a kind of centre-piece for Père Lachaise cemetery, where it now stands [p. 69]; and for the sake of it the cemetery is well worth a visit. It is perhaps rather pagan in feeling; it certainly portrays the fear of death more than any hope, though this is somewhat corrected by the basrelief of the watching angel in the section of the tomb at the base. A fine point in the conception of the two central figures in the doorway is that evidently the woman is intended to be the stronger nature in the face of death; it is she who seems to console and support the man. But the whole work is one of the grandest and most impressive productions of sculpture, ancient or modern. It is rather disappointing that the sculptor has produced nothing since that is at all on the same level; he seems (for the present) to have exhausted his genius in this effort.

It was some time previous to the year 1898 that a subscription committee formed to erect a monument to Balzac gave a commission to that end to M. Rodin. He kept them a long time waiting, and finally played on them what can only be regarded as a bad joke and almost an insult to the public, by sending to the New Salon in 1898 a kind of ghoul-like *ébauche* which he invited us to accept as a statue of Balzac,* but which reminded one rather of the fate of Lot's wife who was turned into a pillar of salt. Whether the sculptor was shrewd enough to foresee and calculate upon the effect which this escapade would have one cannot tell; but if he was, he had his reward. We live in a generation when anything eccentric and *outré* in art is safe to find a band of critics to tell us that this is a great work which the general public cannot appreciate. Accordingly, after the Balzac ghost had been laughed at for two or three weeks, arose the people who discovered that this was a great work, and its author the greatest sculptor of the day. The journalists scented copy from afar; and the editors of English magazines (of all classes of educated Englishmen probably the most ignorant of art) must each have their Rodin article, where he was extolled as the greatest of French sculptors by hysterical poets and others who probably did not know the works of a single other French sculptor. Then we had a committee formed to purchase for the nation the "John the Baptist" figure; a purchase unfair both to the nation and to M. Rodin, since he has done much better things than this, which is an awkward, ungainly figure; besides that a nude John the Baptist is an absurdity, the idea of nudity being perfectly foreign to Oriental prejudice and habit (and in fact we are actually told what his "raiment" was). But a more pertinent point is this: the full-size clay of that statue was exhibited in London twenty-five or thirty years ago, as the central object of an exhibition of French work in Piccadilly (I think in the old Dudley Gallery). Why was not a committee formed then, to purchase this great work for the nation? I reply, "Because no Rodin craze had then been set up." The same with a finer work, "L'Age d'Airain," which was illustrated two or three years ago in an art periodical as "a fine work hitherto unknown to the English public." It was exhibited at the Royal Academy in 1884, where it stood on the left hand just inside the door into the Octagon room, and I remember thinking it the most powerful sculpture work in that year's Academy (for I knew that Rodin was a remarkable sculptor years before this craze was got up about him). Why was it so utterly unnoticed that the editor of a leading art periodical did not even know that it had ever been exhibited in England? Because no Rodin craze had been set up. For the rest, M. Rodin

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of plain features and strong personality. The alteration aroused a good deal of popular criticism; I passed the place just after the remodelled work had been erected, and the pedestal was covered with scraps of written or printed protests stuck on by various discontented persons. It is a curious instance of the popular interest taken in such matters in France, or in Paris at all events. In London probably the man in the street would not have troubled his head about it.

* The Old Salon would never have accepted such a work among their sculpture. The New Salon is the appointed refuge of painters and sculptors who glory in eccentricity and ugliness. The committee for the monument at once threw over Rodin, and gave the commission to Falguière, who produced a characteristic seated figure of Balzac, which was a good likeness of the man, whereas M. Rodin's head, as far as it was modelled at all, did not even pretend to be a likeness.

is a sculptor of genius but not of very elevated conceptions. His "Le Penseur" is a very powerful figure, but I should have taken it to represent "Athlete resting" rather than a "thinker." "Le Baiser," which was at the New Gallery some years ago, is a work which illustrates a form of sculptural technique which I think he invented, and which has been a good deal imitated recently. The object seems to be to avoid any sharp or hard delineation in the marble, to round off points of contact or of modelling as if the work had been executed in some material that had been partially melted on the surface. There is something to be said for this; it is undoubtedly possible to delineate too sharply in marble; and I am reminded of Mr. Colton's advice, in one of his lectures to the Academy students, to beware "lest in trying to represent life they represented death," *i.e.* by indicating too precisely the osseous structure beneath the flesh. The device, as in "La Pensée" and some other works of the same class,

"Victor Hugo." By A. Rodin.

of sculpturing merely a head issuing from a rough block of marble, no doubt serves to attract attention, but it comes rather among the tricks than the fair and rational resources of the art. M. Rodin's monumental reclining figure of Victor Hugo seems to me the finest thing he has ever done; he has symbolised the best side of Hugo's genius, and I prefer it to Dubois' large monument with the trumpeting figures. But it is to be regretted that even this could not be presented to the public without the usual kind of adventitious *réclame*. It was sent to the New Salon unfinished, M. Rodin appearing to claim that the public are to accept with gratitude any fragmentary work he chooses to give them—headless trunks, heads without bodies, or bodies without legs or arms; and while everything else in the sculpture-room at the New Salon was put on a neat pedestal, the fragmentary Victor Hugo was dumped down on some rough planks in the middle of the room. Things of this kind could not be done either at the Old Salon or at the Royal Academy, both of which, quite rightly, demand finished works and not fragments.

I should like to mention in passing a remarkable work which I came across in the New Salon in 1897, by a sculptor, M. Illzach, whom I have never heard of before or since. This was a set of nine life-size heads in coloured wax, intended to symbolise the nine Symphonies of Beethoven. They were not only fine heads, but they showed a remarkable æsthetic insight; they really expressed, respectively, the essential character of the nine Symphonies. I wished very much to have secured photographs of them, but found the cost of taking nine separate photographs prohibitive. I should like very much to know what became of them, and whether they are in existence anywhere.

Among other French sculptors of the day M. Hector Lemaire (pupil of Carpeaux and Falguière) claims an honourable place for his grand statue, heroic size, of Duguesclin, the great French warrior of the fourteenth century, whose prowess was so disastrous to the English. It now stands on a mediæval-looking pedestal in his small native town, Châteauneuf-de-Randon. M. Lemaire's versatility is shown in the fact that he is the author also of one of the most graceful and fanciful works ever exhibited at the Salon, "Offrande à l'autel de l'Amour" (Salon, 1904), a nude figure of a young girl making an offering to a little statue of Cupid on a pedestal. It is a kind of thing one can imagine that Fragonard might have done had he been a sculptor. A cognate subject is the group of figures entitled "Offrande à Venus" (Salon, 1906), by M. Peyre (pupil of Falguière and Mercié), who also exhibited in the same year a lovely group of two nude sisters embracing, entitled "Tendresse." In 1903 he had a finer work than either, "Harmonies," two lovers reclined and gazing up into the sky; it might have been suggested by the love passage of Lorenzo and Jessica in the *Merchant of Venice*:—

> "Look how the floor of Heaven
> Is thick inlaid with patines of bright gold;
> There's not the smallest orb which thou behold'st,
> But in his motion like an angel sings,
> Still quiring to the young-eyed cherubim;
> Such harmony is in immortal souls."

Comparisons may be odious; but, taking sculpture for the moment as a mode of expressing ideas rather than as mere design, is not this a much finer and more intellectual expression of love than the rather sensuous "Le Baiser" of M. Rodin?

As an example of a use to which sculpture has sometimes been put in France, that of making what may be called a picture in relief, we may take M. Moncel's "Vision de Poète" (Salon, 1907), which in fact is another monument to De Musset, representing the poet contemplating a vision of some of the personages of his poems. This is rather too pictorial a use of sculpture, which may easily be abused; but in this instance at least it has been very well done. Among subjects taken from classic legend I may add to those already noticed M. Gasc's basrelief of "Hero and Leander" (Salon, 1909); M. Charpentier's flying figure symbolising "Les Adieux d'une Hirondelle" (Salon, 1894), very pretty though rather a doubtful treatment for sculpture, since a flying figure in the round has to be supported by its feet—it is quite a different problem from basrelief; and M. H. Cordier's fine draped figure "Nymphæa," in this year's Salon.

Among some special tendencies in French sculpture there is rather a liking for the revival of the type of the ancient Gaul, the pre-Roman inhabitant; a fine example is M. Tournier's "Le Guet," the half-savage warrior lying in wait for his enemy; and the same type is seen in Boisseau's fine group "Défense du Foyer" (Salon, 1887). Then we have sculpture glancing at labour problems—from the art point of view rather too much of it of late years; it is a recent development; witness M. Bouchard's "La Carrière" (Salon, 1907), the dead quarryman carried up on the shoulders of two of his mates. This is one

group of two laughing girls in frocks carrying a third between them, under the title "En Chaise, Madame." All these works, though humorous, are in good taste, and quite legitimate sculpture.

There is no class of French work more interesting than the monuments to celebrated persons, or more characteristic of the excellent judgment of the French in memorial sculpture. There is seldom any attempt at the mere full-length figure of the person commemorated; almost always it is the portrait bust alone, on a pedestal or column, accompanied by one or more symbolic figures; by this means the difficulty so often felt in England, of dealing in sculpture with a fully dressed figure, is entirely avoided. For example, M. Pech, who was mentioned just now (he is a pupil of Falguière and Mercié), had to make a monument to Charles Perrault, who was a kind of French Hans Andersen of the eighteenth century, compiler of fairy tales; and he shows us the portrait head on a pedestal, and a group of delighted children dancing around it (Salon, 1908). M. Gauquié, a sculptor who has given himself a good deal to decorative design (he designed the lamp-standards on the Alexandre III bridge), produced an admirable monument to a great French actress, Mlle. Clairon (Salon, 1898), showing the portrait head on a very well designed pedestal decorated with emblems and insignia referring to the theatre.* Then we have M. Larche's charming monument to Corot (Salon, 1909), which shows us the portrait head of the painter crowned by a nude figure who seems to represent the wood-nymph of his forest scenery; and in somewhat the same spirit M. Lombard shows us the bust of Watteau crowned by one of the eighteenth-century ladies whom he painted so well. M. Maillard, in his monument to Fragonard for the artist's native place, Grasse (Salon, 1907), gives the whole figure of the artist, palette in hand, but accompanied by a figure which is approximately copied from one in the first of Fragonard's remarkable series of decorative paintings of a love story, exhibited some years ago at the Guildhall, where the girl is represented running coquettishly away on the approach of her admirer; the monument quite expresses the character of Fragonard's art. M. Marqueste, in a monument to Ferdinand Fabre, the novelist, gives us his portrait bust and the figure of a character out of "Le

Monument to Mlle. Clairon. By H. Gauquié.

* There was an amusing *contretemps* in regard to this work. Mlle. Clairon appears, from contemporary accounts, to have been the most talented actress the French ever had; but unhappily she was a lady of such exceed-

Chévrier''; M. Carli, in a monument to Monticelli, gives the medallion portrait and a nude figure seated by the grave-stone—a more classic form of monument, perhaps, than was suited to an artist who tried to paint pictures to look like carpets. An admirable example is M. Frémiet's monument to Raffet, a brilliant artist-lithographer of the early part of the last century, who devoted himself mainly to the illustration of Napoleon's campaigns; the sculptor gives us the portrait head on a column, and at the base of it the bronze figure of a drummer beating the charge. Probably few visitors to Paris see this very characteristic monument; it is in rather an out-of-the-way situation in the small garden which lies between the eastern part of the Louvre and the river. A very large monument to a M. Macé, which occupied a central position in the Salon of 1901, is worth mention in this connection, not as a work of the highest class in every sense, but for the way it tells its story. The sculptor, M. Massoule, is perhaps a local artist; he is not a member of the Société des Artistes Français. There was no inscription on the monument, but you could see at once that Macé, whose medallion portrait appeared on the pedestal, must have done something for primary education; possibly built schools. At the summit was a draped figure holding aloft an open book, at the base a boy and girl obviously hurrying off to school with their books (the figures were all bronze, the architectural centre of marble). Now, in England, for a monument of the same sort, we should have had the full-length figure of the benefactor, with his boots and his trousers and his coat and his tie all carefully modelled, and an inscription on the pedestal to say what were his claims to our gratitude. Is not the French method more interesting?

Monument to Corot. By Raoul Larche.

Among other noteworthy monuments is that to Chopin by M. Froment-Meurice, in the

ingly bad reputation in other respects that when the Government ordered a monument to her in her native town the respectable burgesses of Petite-Ville-en-la-Boue, or whatever it was, protested that they wished for no monument to such a person in their virtuous borough. I do not know how the dispute ended; probably the Government had their own way. The French Government is very much taken up with the idea (an excellent one in a general way) of erecting memorials to celebrated people in the place of their birth; and it has the concomitant advantage that it affords a great deal of interesting work to the sculptors.

Parc Monceau at Paris, in which, as in Mercié's De Musset monument before mentioned, the principal figure is represented in ordinary costume, seated near a basrelief piano and attended by a Muse of Music—a rather unhappy mingling of the realistic and the symbolic; and in the same little park is M. Verlet's monument to Guy de Maupassant, where the favourite method is again employed of giving only the portrait bust with an attendant figure, which in this instance takes form of a young lady in modern costume musing over the novel she has just finished (if it is one of Maupassant's tales she is probably thinking of what she had much better not be thinking of); this, which has had a good deal of popular admiration, is too realistic, and not nearly so suitable for sculpture as those in which idealised figures are employed, and it is not an example to be imitated. And for one of the most beautiful and poetic of recent monuments we come back again to M. Mercié, whose monument to Armand Silvestre, the poet (Salon, 1905), shows a broken column on a pedestal, and three graceful draped figures in low relief on the surface of the column, as if circling round it—a sculptural work full of poetic suggestion. The column may possibly have reference to the fact that Silvestre was the author, among other things, of a fine sonnet on Architecture, which he sums up as representing—

"La matière ployée sous l'. sprit triomphant."

Among works in sculpture which have a specially architectural character may be named M. Theunissen's four figures on pedestals which flank the two ends of a bridge at St. Quentin, and represent the Seine and its tributaries, the Escaut, the Somme, and the Oise. The Seine and the Escaut appeared in the Salon of 1905. These are effective examples of architectural and sculptural decoration combined. On the two piers of the Pont Mirabeau over the Seine, at Auteuil, are four spirited symbolic figures by M. Injalbert, of which the best is the nude figure representing "Commerce"; it is perhaps in view of the present dependence of trade upon blatant advertising that "Commerce" is represented as blowing her own trumpet. The present year's Salon contained a large and important work by M. Terroir, "Vision Antique," in which architecture is combined with figures, a portion of a Doric colonnade forming the background to two groups of nude figures suggesting a kind of idyll of antique existence. This introduction of architectural features in combination with figures is becoming rather a favourite device in French sculpture. Among examples of sculpture used in a kind of decorative sense in combination with architecture is one which claims notice for its size and conspicuous position if for no other qualities—Bartholdi's draped statue of "Liberty enlightening the world," a piece of good solid commonplace which, as everyone knows, has been carried out on a colossal scale as a kind of lighthouse at the entrance of New York Harbour, a function for which the design is just about good enough. A less colossal replica of it stands at one end of the "Ile des Cygnes" in the Seine, at Paris. Bartholdi, in spite of his Italian name, is supposed to be included among the ranks of French sculptors, but he had none of the French genius.

I will conclude by the mention of some of the works which illustrate the use of sculpture in symbolising abstract ideas. The "Douleur" by M. Blondat, in this year's Salon, shows that he can treat serious subjects as well as the playful subjects by him which have been described above. "Immortalité," by Longepied (Salon, 1886), is a fine group of a winged figure showing to a dying man the tablet on which his achievements are inscribed; it gained its author (now dead) the Salon prize of the year for sculpture. M. Coutan exhibited in the Salon of 1904 a fine group, "Vers l'Infini," showing a soul emerging from the tomb; there is something of the manner of Roubiliac about it. M. de Saint-Marceaux' "Génie gardant le secret de la Tombe" is a work exceedingly fine in its lines in a decorative sense; perhaps slightly theatrical in style. M. Guilloux in 1906 exhibited a fine and impressive group under the title

"La Nouvelle Muse," in other words, the Muse of Music, represented as especially the art of the modern era. The legend of the Sphinx has had a good deal of attraction for French sculptors; Christophe's "Le Baiser Suprême" (Salon, 1892) is a powerful group of this class, showing a man gripped in the arms of the Sphinx whose kiss meant death; more recently M. Blanchard treated the same subject in his "Jeune Femme interrogéant le Sphinx" (Salon, 1909). "Le Soir de la Vie" (Salon, 1907) by M. Seysses, a pupil of Falguière, is a work of very poetic suggestion, the draped figure of an aged man surrounded by figures or faces growing out of the rock behind him, representing the recollections of his youth. In the Salon of 1896 was M. Cordier's exceedingly powerful and almost sinister group "Le Doute," in which a youthful figure listens with perplexity to the doubts suggested by an aged person who seems to represent the spirit of scepticism—a most expressive work. In the 1902 Salon M. G. Michel attempted the very difficult problem of representing in sculpture "Form disengaging itself from Matter," an idea rather too complicated for expression in sculpture, and in fact needing the Catalogue title to explain it; with that help, however, the work is not without interest. In this year's Salon M. Carli achieved a far greater success in an analogous subject, "Spirit and Matter," a group of great power which sufficiently explains itself; "Matter" is symbolised by a powerfully modelled nude figure of a man struggling with a winged figure which points upwards: one of the finest works in this year's exhibition. The "Muse Exilée" of M. Champeil (Salon, 1903) is a basrelief of a most beautifully designed nude figure half reclined on rocks, and dropping her lyre, as she gazes into vacancy with an expression of sadness and longing. We have again to recognise the genius of M. G. Michel in his fine contemplative figure of an astronomer gazing

"Esprit et Matière." By A. H. Carli.

upwards, a work suggested by a sentence from Pascal: "Le silence éternel des espaces infinis m'effraie" [p. 92]: to say that the sculptor has fully realised the expression of his subject is to give about the highest praise that could be given to it. I conclude with an illustraion of the work which of all others in modern sculpture has most fascinated me, M. Jean-Boucher's "Antique et Moderne," in which the calm meditative figure of the ancient philosopher, untroubled by doubts or scientific theories, is contrasted with the female figure representing "Moderne," poring over a book with her hand to her brow. The fact that this figure is nude is not, I think, intended to symbolise anything; it is done for sculptural contrast with the broad draperies of the other figure. Both as an artistic composition and as an intellectual symbolism this seems to me one of the most remarkable productions of modern art.

"Muse Exilée." By J. B. Champeil.

Two words in conclusion. You will admit that the illustrations we have seen form an exceedingly fine collection of work in sculpture. I would ask you to remember that these are but a few culled from out the last twenty years or so of French sculpture. If I could have produced to-night illustrations of all the works in the Salons since 1889 which have aroused my own admiration, I could have kept you here looking at lantern slides all night. Secondly, I would suggest a consideration of some of the circumstances which give such scope and encouragement to sculpture in France, and have put the genius of French sculptors in such a far better position for development than the sculptors of our own country enjoy. In the first place, the annual exhibition at the Salon affords a vast space for the display of sculpture without crowding, and under the best possible light. But a still more important point is that the public are interested in the art, and (best of all) that the French Government gives it liberal encouragement and reward. Go into the sculpture hall of the Salon about a week

after it has been opened, when there has been time for consideration of its contents, and you will find a score or more of important works in sculpture bearing the label, "Acquis par l'Etat." Just imagine our Government sending representatives to the Royal Academy exhibition to see what would be worth purchasing for the State! Even works which might seem to have a patriotic value fail to move them. If such a work as Mr. Reynolds-Stephens's "A Royal Game of Chess" in this year's Academy, symbolising one of the greatest of

"Antique et Moderne." By Jean-Boucher.

English victories, had appeared in the Salon, its author would at once have received an offer from the Government to purchase it for some public institution. I mention this concrete instance because, when the plaster model of that work was first exhibited, I made a personal appeal to the then First Commissioner of Works to purchase it for the Naval College at Dartmouth, as a work symbolical of our greatest and most epoch-making naval victory. He was sympathetic enough, but could merely say that "he had no funds for such purposes." What an answer for the representative of a wealthy country like this to give! The genius of

the English in sculpture may not be equal to that of the French; but for English sculpture to have any chance of similar development it must have similar encouragement. The public must learn to take an intelligent interest in it, instead of thinking (as they apparently do) that "art" means "pictures"; and the Government must learn to realise that monumental sculpture is an art worth the expenditure of public money for its encouragement, and that it is a discredit to a Government to say that it "has no funds for such a purpose."

DISCUSSION.

Mr. Leonard Stokes, *President*, in the Chair.

Sir WM. GOSCOMBE JOHN, R.A. [*Hon. A.*], rising at the invitation of the President to propose a vote of thanks, said that Mr. Statham had given them such a large amount of interesting material that it was impossible in the mere proposition of a vote of thanks to deal adequately with it. They had at least all been able to see the vastness and wealth of modern French sculpture. It was really amazing and bewildering. Some of us would probably have made a different selection of illustrations from that of Mr. Statham, but his selection had been quite sufficient to enable us to form an idea of the beauty of French sculpture. Many of the works shown were epoch-making—things which sculptors all over Europe had looked upon as inspirations, and which during the last twenty-five years had moved them to make great efforts. One looked upon French sculpture as the third great school. The Greeks came first, then the Italians, and finally the French, and all our modern schools were more or less based on French sculpture. From the time when the great French cathedrals—Chartres, Amiens, Rheims, and others—were built, down to the present day, great sculptors had never been lacking in France. French sculptors had fortunately never been tied up to conventions, at least to those which paralyse. Such conventions as those of Thorwaldsen and Gibson, in particular, did not occur in French sculpture. There they would be impossible. One got such men as Pradier, who was more or less contemporary, but his work always showed intimacy with Nature. It was the other way about with Thorwaldsen and Gibson. Nature took second place, and it was the antique—and not always the good antique—that guided them. Mr. Statham was very interesting in what he had to say about Rodin. The mere mention of Rodin's name was a battle-cry: it was a challenge; but everyone, he thought, would agree, whether admiring Rodin or not, that he was an epoch-making sculptor. [Mr. STATHAM: Hear, hear.] He was in entire agreement with what Mr. Statham had said about Rodin's "Balzac," but he did not agree with him in what he said about "John the Baptist." He knew of no figure more remarkable in modern sculpture than Rodin's "John the Baptist," and he was very glad we had a copy in South Kensington. Why we in England had heard so much of Rodin was chiefly because the Press found him interesting "copy." There were other men well worthy of our attention. French sculpture did not mean Rodin alone; although he might sound the deepest and fullest notes, it required many others to complete the gamut. It occurred to him very strongly that some of those men whom Mr. Statham had mentioned—Mercié, for instance, whom he placed first—were men who had something definite to say, but that many of the others whose works they had seen, in spite of their beauty, were merely echoes. Yet another thing impressed the observer—namely, the place and importance of the nude in French sculpture. It was perfectly true, as Mr. Statham said, that in dealing with abstract ideas in sculpture the nude was necessary. We could not express them in costume, because costume tied us to a particular period. Here in England the sculptors were often in an unhappy position. Artists full of enthusiasm and capacity, and strongly desirous of doing all they could to make beautiful statues and worthy monuments, were prevented from doing so by the commonplace ideas of committees, who invariably objected to the nude or to anything but a coat-and-trousers treatment. This was not a question of merit or demerit in the sculptor; it was a question of understanding on the part of the committee. The same was true of America, for in the work of St. Gaudens we scarcely found a nude figure. And why? Not because of his dislike of the nude, for a great sculptor like St. Gaudens would delight in it, but because American opinion, like British opinion, was against it. They would have statues with coat and trousers and watch-chain and boots. Sculptors had unhappily to deal with that problem. Mr. Statham mentioned the kind of memorial in which there was a bust of the person commemorated, and below it an allegorical or symbolical figure. Ask any sculptor who had done public work in this country about this, and he would reply, "I tried to get it, I offered to put in the figures gratis, but they refused. They *will* have the coat and the trousers and the boots." Coming to Mr. Statham's concluding remarks about State patronage, he regretted the absence of this in England. In France, the State was the great patron of sculpture, and its example was followed by the various municipalities all over the country. That was why the Salon was

filled with a mass of really living work. Here the State was entirely indifferent, and our municipalities—saving a few worthy exceptions—left sculpture alone. The one thing that kept ideal sculpture alive in this country was the Chantrey Bequest, for there was little private patronage of ideal sculpture. As to the place of exhibition, we all knew the sculpture gallery in the Academy. There, again, it was most discouraging to find that it was only possible to show the smaller things adequately. Unless the work was smooth and highly polished, the British public, and even many artists, were not interested. There was a pressing need for more sympathetic committees to deal with our national monuments as a whole ; but perhaps the greatest need of all was for a larger place in which to show our sculpture, then perhaps the British public would appreciate it better. He moved a very hearty vote of thanks for the paper. Mr. Statham had had the advantage of an intimate knowledge of French sculpture for the last twenty-five years, and his lecture had been of most absorbing interest.

Professor W. ROBERT COLTON, A.R.A., said Mr. Statham had given them a delightful evening, one of a kind seldom got in this arid desert of England. He had covered the greater part of the subject of French sculpture, and what he had left unsaid Sir William John had supplied, so that there was little left for him to say. Mr. Statham observed that one of the great qualities of sculpture was its perfect form. To-day we hardly seemed to think much of the perfect form of sculpture. The Greeks, when they made a figure to decorate a building, no matter how far it might be from the eye, on a pediment or what not, employed perfect modelling. The Elgin marbles, it was said, were never properly seen until they came to the British Museum. They were so well done—perhaps unnecessarily well done—that it was imperative that they should come nearer to the eye in order that their great subtlety could be properly appreciated. But to-day the want of appreciation of sculpture was such that, among some people at least, the roughest hewn blocks seemed to have a virtue which did not belong to the perfectly finished. The higher we go the less we get in the way of finish. He had the greatest admiration for French sculpture, but there was a good deal of fine English sculpture which was not, as a rule, seen, and could not be seen. It must have been a surprise to those who were accustomed only to the Royal Academy when they went to the Franco-British Exhibition and found English sculpture of a sort that was at no disadvantage when placed side by side with French. A French sculptor who was present remarked that the English had a natural feeling for sculpture and had nothing to unlearn. The characteristic reticence of the race lent itself naturally to sculpture. That cloven hoof which sometimes showed itself in French sculpture did not appear in our own national art. Mr. Statham had drawn attention to what he called the superb dancing group on the Opera House at Paris. It was, indeed, superb for its vitality, but it was rather overdone. While on the subject of limitations, he should like to mention one great group which he saw at the Paris Salon. This particular group represented the bar of a café in Paris. There was a fat landlord behind the bar, rows of bottles to the side, and in front a drunken woman lying on the floor, her market basket spilled, and vegetables thrown in all directions. That, he thought, was beyond the legitimate use of sculpture. A great deal that Mr. Statham had shown them was of older date—not very old, of course—and more placid, but some of it was not so classic, if one might use the word, and it would be noticed that these more recent productions were more florid and cut up to a greater extent than was the case with the earlier work. Rodin copied his liking for unfinished sculpture from Michelangelo. He saw the wonderful effect of rough stone and stone just pointed, and then the small finished part. Michelangelo, of course, was so busy that he really had not time to finish his sculptures. Rodin grasped the effect, and had pushed it to an extreme, at least in his later work, since he found that eccentricity paid. When he produced his "Eve," he hit upon the idea of burying the pedestal in the sand of the floor of the exhibition. This attracted the Press critic. The next step was to place the bust of a gentleman on a high pole in the middle of the Salon, and thereby he greatly elevated it in the mind of every journalist ! In the case of that particular figure of the Victor Hugo memorial, which Mr. Statham showed, he (the speaker) saw Rodin knock off an arm of the figure and replace it, and do the same thing with a foot, when it was being prepared for the exhibition. But the foundation of the whole thing was that beneath his eccentricities Rodin was a great sculptor. A great deal of his work was mere trimming, but there was the foundation of a great artist somewhere if one could find it. It had also been discovered among the Rodin school of sculpture that if a sculptor did a figure, that was so much to his credit, but that if he cut a figure up and showed it in sections his credit was enhanced. Obviously, if the sculptor cut off the legs, and exhibited them and the torso separately, there was great gain to him. There was further gain if he could stick them together afterwards and exhibit them as a whole. After all, there had been some wonderful sculpture in modern times, but the trouble was that we tried to show too much, too much suffering, too many passions. The best sculpture was done in an age when the thought was easily crystallised. The artists had one simple idea to express, and that was beautifully expressed. There was no question that it was the simplicity of the idea and the difference of the religious and philosophic thought of the day which caused that crystalline clearness of sculpture in classic times. In seconding the vote of

thanks, he would take the opportunity of thanking Mr. Statham for the many kindly criticisms he had passed upon his (the speaker's) own efforts.

The PRESIDENT, in putting the vote of thanks, said that if we were to reverse the order of the requirements put forward by Mr. Statham at the end of his Paper, we should be nearer the mark. He wanted a place to exhibit, a Government that would purchase, and a public that would appreciate. If we had an appreciative public it seemed likely that the other things would follow as a matter of course. We must devote ourselves to stirring up the public, and he thought the public were, indeed, becoming more appreciative every day. The particular subject that evening was French work, and he was rather surprised that Mr. Statham, as an architect, did not read the architect more into sculpture, for architectural feeling was essential in some of the sculptor's works. Mr. Statham had told them of a sculptor who became a painter, and of a painter who became a sculptor, but he did not tell them of any architect who became a sculptor, or of any sculptor who became an architect. He should have thought the sculptor and the architect were more closely allied than the sculptor and the painter. In addition to his paper, the Meeting had to thank Mr. Statham for the lantern-slides. These were all exceedingly interesting, and he should like to express to him the thanks of the Meeting for having taken the trouble the preparation of such a lecture must have entailed.

Mr. STATHAM, in responding, said he was quite conscious that every year in the Salon there was a certain amount of vulgar realistic sculpture, which he considered perfectly detestable, but this kind of work was only a small proportion of the whole. He had also a high opinion of English sculpture, whose progress during the last twenty-five years had been wonderful. With regard to the illustrations he was indebted for most of them to a number of French sculptors without whose kindness in sending photographs he could hardly have given his paper.

"Le silence éternel des espaces infinis m'effraie." By Gustave Michel.

MODERN GERMAN HOSPITAL CONSTRUCTION.—II.

By William Milburn, Junr., B.Sc. [*A.*], Henry Saxon Snell Prizeman 1908, Godwin Bursar 1910.

(*Continued from p.* 56.)

CHILDREN'S DEPARTMENTS—*continued.*

AT the Royal Charité Hospital, Berlin, there is a very fine and complete children's clinic, comprising an out-patients' department, educational block, pavilion for non-infectious diseases with 44 beds, a quarantine or observation block, already described, with eight beds, four pavilions for scarlet fever, whooping cough and measles, diphtheria, and mixed infection, respectively, with 49 beds, and a block for experimental animals. At the entrance to the out-patients' department are special isolation and examination rooms for doubtful cases, with direct access to the quarantine or infectious diseases pavilions, so as to prevent the introduction

Fig. 27.—The "Box" Ward, the Children's Clinic, Royal Charité Hospital, Berlin.

of infectious cases into the out-patients' department proper, which comprises a large waiting-hall, examination, and operation-rooms. The educational block comprises the directors' and adjoining rooms, a large lecture-theatre seating 120, with rooms for patients adjoining, and on the first floor laboratories for chemical, microscopical, and bacteriological work. The pavilion for non-infectious cases is connected to the out-patients' and educational block by a closed corridor. On the ground floor is the infants' department with 14 beds, the milk-kitchen and annexes, and the "box" ward with 10 beds [fig. 27] for young children, in which, in order to prevent the conveyance of disease, the beds are separated from one another by glazed screens of iron construction about six feet in height. Each child has its own feeding

utensils on plate-glass shelves, while robes only to be used for each particular "box" by the doctor or nurses are hung at the end of each screen. On the first floor is the accommodation for older boys and girls, comprising two ten-bed, two two-bed wards, an operation-room, etc.

Other fine children's pavilions are found at Cologne Lindenburg, where the children's clinic is of three stories, with the out-patients' department and scientific rooms on the ground floor, the girls' and infants' department on the first floor, and the boys' and private patients' department on the second floor, the maximum number of beds per ward being ten; and at the Frankfort City Hospital, where detached blocks for children are provided for medical, surgical, and skin diseases respectively, the equipment here being particularly worthy of note, each infant for example having a separate bath and feeding utensils.

MATERNITY AND GYNÆCOLOGICAL DEPARTMENTS.

A large number, though not all, of the German general hospitals contain special departments for maternity and gynæcological cases, and the buildings are always designed to meet the special requirements.

One of the best is at the Eppendorf Hospital, Hamburg, where a special department was erected in 1899 on the western portion of the site beyond the domestic blocks. It consists

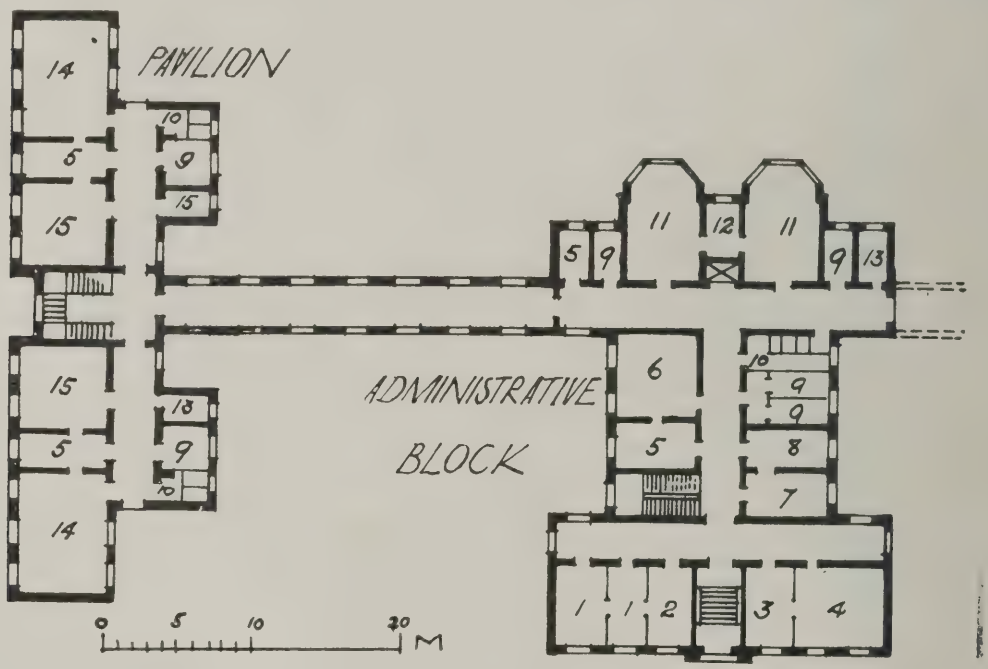


Fig. 28.—Ground Floor Plan of the Maternity Department, the Eppendorf Hospital, Hamburg.

1, Head Sister. 2, Office. 3, Waiting Room. 4, Examination Room. 5, Nurse. 6, Nurses' Dining Room. 7, Head Doctor. 8, Microscopical Room. 9, Bath Room. 10. Water-closets. 11. Labour Room. 12, Sterilising Room. 13, Ward Kitchen. 14, Four-Bed Ward. 15, Three-Bed Ward.

[fig. 28] of a central administrative block, connected by a one-story closed corridor to the lying-in pavilion, space being reserved on the opposite side of the administrative block for a second lying-in pavilion of similar type, while an entirely detached pavilion is provided for septic cases. The administrative block contains in the basement the kitchen and maids' apartments, on the ground floor the doctors' and nurses' rooms, receiving rooms for patients, and two labour rooms with a sterilising room between, while on the first floor are wards for private

patients and gynæcological cases, two operation-rooms, and staff apartments, and on the roof floor large dormitories for patients. The lying-in pavilion is of three stories, and each floor is centrally divided by the hall and staircase into two lying-in stations, each of which comprises two wards for four and three beds respectively, with nurses' room between, and ward kitchen, bath-room, and water-closets to the opposite side of the corridor.

At Hamburg St. Georg, Virchow Berlin, Frankfort, Charlottenburg, and the Charité Berlin, the maternity and gynæcological departments are contained in blocks designed on the corridor system, the wards containing a small number of beds each.

At Düsseldorf the women's clinic is situated on the second floor of the surgical pavilion, particular attention being paid to the labour rooms, which are treated as ordinary homelike rooms, and are preferred to the large labour rooms so often seen, designed on the lines of operating-theatres and containing a large number of cases.

With regard to special hospitals, a very fine example is the Royal Women's Clinic, Dresden, opened in 1903, which comprises four blocks, the administrative block, the maternity and gynæcological pavilion, the septic pavilion, and the domestic and technical block. The pavilion is of three stories of the corridor type of plan and contains 148 beds, the wards containing a maximum number of eight beds, and the operating and labour rooms being in the centre of the pavilion. The septic pavilion is of one-story, and contains two six-bed and two single-bed wards, labour room and adjoining rooms.

Another very fine special hospital is the Maternity Hospital at Cologne, opened in 1908, which comprises an administrative block, a pavilion for maternity and gynæcology with 144 beds, an isolation block with 22 beds, a domestic block, boiler-house block, and directors' house.

OPHTHALMIC, AND NOSE, THROAT, AND EAR DEPARTMENTS.

As a rule for the ophthalmic, and the nose, throat, and ear departments, special wards are set apart in the surgical pavilions, but in some hospitals special blocks are erected for these departments.

At Hamburg Eppendorf, a special three-story block with 120 beds contains the ophthalmic department. It is of the corridor type of plan, the corridor being to the south and widened out for use as a day-room, and the wards contain a maximum number of eight beds, the usual operating theatres, examination and testing rooms being provided. At Dresden Johannstadt, until the erection of a special block for the purpose, the ophthalmic department is temporarily contained in one half of one of the infectious diseases pavilions; at Düsseldorf special rooms are contained in the surgical clinic; and at Frankfort a special block has recently been opened.

A very fine special clinic, the Royal Ophthalmic Clinic, has recently been opened at Munich. The block is of three stories, and contains on the ground floor the administrative, receiving, and out-patients' department, in the basement the domestic and technical rooms, and the bathing department, and on the upper floors the wards and operating theatres, three separate departments being arranged for private patients, aseptic, and septic cases respectively. The equipment is of the latest and best type, and the whole clinic is most complete.

In the Royal Charité Hospital, Berlin, the throat, nose, and ear departments are contained in a special block of the corridor type. On the ground floor are the out-patients' departments, on the first floor the throat and nose clinic, and on the second floor the ear clinic, the equipment throughout being particularly worthy of notice.

SKIN AND VENEREAL DISEASES DEPARTMENTS.

The majority of the general hospitals contain special departments for skin and venereal diseases, well separated for men and women, and with separate airing courts with railings or high walls, so as to prevent contact of these cases with the other patients in the hospital.

At Nuremberg, Schöneberg, and the Virchow, Berlin, good examples of blocks for these departments are found, in the first two of two-stories with a central corridor, and in the last of three-stories with a side corridor. At Düsseldorf there is a very fine clinic consisting of two two-story pavilions for men and women respectively of the corridor type of plan, connected to a central one-story block, which contains the light treatment and operation-rooms.

In all these blocks a large provision of special rooms for treatment by the Finsen Light and Röntgen rays, operating theatres with adjoining rooms, special baths, and laboratories for research, are always found.

MENTAL DISEASES DEPARTMENTS.

Special provision is, as a rule, made in the general hospitals for the reception of mental diseases, and particularly so in the centres of medical education and University hospitals.

Fig. 29.—Ward, the Royal Psychiatrical Clinic, Munich.

The blocks, examples of which are found at Hamburg Eppendorf, Nuremberg, Dresden Johannstadt, and the Virchow Berlin, are usually well away from the rest of the hospital, and separate walled airing courts always under observation are provided for men and women. Observation wards containing some six beds or so for quiet patients are provided, while violent patients have single wards. All fittings are of the asylum type and can only be controlled by the attendants, the doors being self-locking, window-cords, fastenings, and blind-cords being in locked wall-boxes, water-closets self-flushing, and the arrangements for heating, ventilation, and lighting, external to the wards.

At Munich the Royal Psychiatrical Clinic attached to the University is said to be the finest in the world. It was opened in 1904 and is situated in the "clinical" quarter of the city, the total accommodation being 120 beds. It is a large block of three stories with outshoots at either end and in the centre, on the corridor plan, the corridor facing the street and

the rooms opening on to the internal courts. In the centre of the ground floor is the large entrance-hall, administrative, students', and out-patients' rooms, and on the first floor the large clinical lecture-theatre. One wing is for men, the other for women, on the ground floor being the private patients' department, on the first floor the receiving and observation departments [fig. 29], and on the second floor the observation and quiet patients' departments. The laboratories and research rooms are on the roof floor, and the kitchens and domestic rooms in the central out-shoot.

At the Royal Charité Hospital, Berlin, the planning of the Psychiatrical and Neurological Clinic, which contains 200 beds, is particularly good. It comprises three series of buildings connected together by a central corridor. The first is the educational and neurological clinic, which contains on the ground floor the administrative and staff rooms, the laboratories and research rooms, and the out-patients' department, and on the first floor the clinical lecture-theatre with seating for 185, and the neurological clinic with wards for men and women. The second block is the psychiatrical clinic of two stories, and contains in either wing the accommodation for quiet patients, while the third blocks of one-story are the "villas" for troublesome patients, with single wards.

At Cologne Lindenburg one finds a good clinic, and again at Halle there is a very complete special clinic.

The equipment of these institutions is always very fine and complete, they being largely intended for study and research, and such points as the special cinematographic apparatus for obtaining and recording the facial expression and movements of the insane, or the large provision of baths for continuous baths, by which the violent patients are treated instead of employing padded-rooms, are of considerable interest.

TUBERCULOSIS DEPARTMENTS.

A few of the general hospitals have special departments for tuberculosis—for example, at Hamburg Eppendorf in recent years a department has been formed in the pavilions of the former isolation department, verandahs having been added for open-air treatment; at Nuremberg a special pavilion on the corridor plan was erected in 1904 for female consumptives; and at Cologne Lindenburg a large three-story pavilion is employed for tuberculosis.

It is, however, in the numerous consumptive sanatoria that tuberculosis is usually treated, very fine examples being found at Beelitz-i.-Mark.

PAVILION DESIGN.

The usual orientation for pavilions when there are windows on both sides of the wards is north and south, though when prevailing winds or the shape or levels of the site have to be taken into account this rule may be modified. In pavilions on the corridor system, when there are windows on one side of the wards only, it is usual to obtain if possible an aspect due south. The distance between adjoining pavilions in relation to the height from the ground to the eaves is invariably twice and usually more—at Hamburg St. Georg it is $2\frac{1}{2}$ times, and at the Virchow Berlin it is 5.8 times. At Hamburg Eppendorf the pavilions in adjoining rows are alternated, so as to obtain better ventilation and better aspect for the day-rooms.

The prevailing form for the wards is rectangular. At the Virchow Berlin the 20-bed wards are 69 feet long by 29 feet 6 in. wide, and the curved ceiling is 10 feet 6 in. high at the springing and 15 feet 9 in. at the crown. At Hamburg Eppendorf the 30-bed wards are 84 feet 6 in. long by 28 feet wide and 16 feet 6 in. high in the centre. At Charlottenburg West End the 22-bed wards are 75 feet 6 in. long by 29 feet 6 in. wide and 15 feet 9 in. high, and at Hamburg St. Georg the 16-bed wards are 44 feet 2 in. long by 30 feet 4 in. wide and 13 feet 6 in. high. The beds are arranged as in England on either side of the ward, but they

do not as a rule alternate with the windows, and there is usually a space of about three feet between the head of the bed and the wall so as to allow of free ventilation and easy access for the doctor and nurses. The wall space per bed is smaller than in England, being 5 feet 7 in. at Eppendorf, 5 feet 6 in. at St. Georg, 6 feet 3 in. at the Virchow, 6 feet 10 in. at Charlottenburg, and 5 feet 10 in. at Cologne; and the floor space is correspondingly smaller, it being 78 square feet at Eppendorf, 83 square feet at St. Georg, 97 square feet at the Virchow, 101 square feet at Charlottenburg, and 84 square feet at Cologne; while the cubic space is again lower, it being 1290 cubic feet at Eppendorf, 1129 cubic feet at St. Georg, 1430 cubic feet at the Virchow, and 1590 cubic feet at Charlottenburg.

The small wards are almost invariably rectangular, and their floor and cubic space corresponds to that of the large wards.

As a rule all wards contain one or more lavatory basins with hot and cold water supply, for the doctor or nurses' use after attending each patient, and it is held that the presence of these lavatories inculcates habits of cleanliness in the patients. They are usually bracketed from the walls at each end of the ward, but at Hamburg St. Georg they are placed on a pedestal in the centre of each ward and are said to be more accessible. In some few hospitals slop-sinks are found in the wards, and in some of the wards of the psychiatrical clinics water-closets are provided. In surgical wards sterilisers for instruments or dressings are often bracketed from the walls.

The practice with regard to the reception and admission of patients into the wards differs, at the Hamburg hospitals, for example, several pavilions being set apart for the reception of all new patients, who remain in these wards for twenty-four hours before being admitted to their own pavilion. At such hospitals as, for example, the Virchow Berlin, Cologne Lindenburg, and Munich III., special receiving rooms are placed at the entrance to each pavilion in which all new patients are undressed, bathed, and dressed in hospital clothing, and then conveyed to their ward. Their own clothing is placed in bags, disinfected if necessary, and then stored either in a central clothes-store or in clothes-stores in each pavilion, some hospitals following the first method and others the second.

All of the modern pavilions contain special rooms for the doctor for treatment, which in the surgical pavilions are completely equipped as operating theatres for the performance of minor operations and surgical dressings.

The rooms for the nursing and domestic services are always well designed and arranged, and the equipment of the ward kitchens [fig. 30] is very thorough, comprising as a rule steam hot-closets and plates, steam boiling-pans, gas-rings, sinks, and ice-chests. A separate scullery is often provided, as at Munich III. or Charlottenburg West End. It is not usual to place inspection windows between the ward kitchen and the ward. Large food-stores or pantries are not often provided, there usually being small food-stores in the kitchens. A nurses' duty-room or head-sister's room is often provided, as at the Virchow Berlin. When the nurses sleep in their pavilion, their rooms, in the older type, are usually on the same floor as the wards, but in the more recent, as Schöneberg, the Virchow, or Charlottenburg, their apartments are in an upper story.

In the treatment of the day-rooms for patients attempts are often made to depart from the institutional appearance so often seen, and to obtain as far as possible a homelike or domestic effect, as at Hamburg St. Georg [fig. 31], or at the Frankfort City Hospital, where the artistic treatment is particularly noticeable, there being in the corner of each day-room a small built fountain. Balconies are provided, as at St. Georg Hamburg, or open halls, as at Cologne Lindenburg, while the day-rooms at Eppendorf, Dresden, or Frankfort Bürgerspital, can be practically turned into open verandahs, the latter, as can be seen from the photograph [fig. 32], being almost all glass.

Fig. 30.—Ward Kitchen, the St. Georg Hospital, Hamburg.

Fig. 31.—Day Room in the Children's Department, St. Georg, Hamburg.

The arrangement of the sanitary-rooms is always practical and convenient, and it is of interest to note the much greater provision of sanitary apparatus and floor space in bath-rooms, lavatories, sink-rooms, and water-closets, in such pavilions as the Virchow or Munich III., in comparison with an ordinary English pavilion. The lavatory basins are as a rule provided in a separate room from that which contains the baths. The bath-rooms are large and often contain two plunge-baths, sitz, and douche-baths. In the older pavilions the slop-sinks are contained in the ante-room to the water-closets, but in the more modern completely equipped and separate sink-rooms are provided. The water-closets are separated from one another by partitions of marble, flush or framed wood, etc., raised from the ground and some six or seven feet high, and the room in which they are contained is usually of large dimensions. The non-disconnection of the sanitary rooms by a cut-off lobby is a point in

Fig. 32.—Day Room, Frankfort, Bürgerspital.

which the German plans differ greatly from the English, and at first sight appears to condemn the design, but where the rooms are well placed and modern and up-to-date apparatus employed it is difficult to note any great objection to the non-disconnection.

In the treatment of the dirty linen there are three methods in vogue in Germany. The first is by linen-shoots from the different floors to a room in the basement, where the linen is collected and sorted, as at Hamburg Eppendorf and St. Georg, and Cologne Lindenburg, special attention being paid to the shoots so that they can be easily cleaned; the second is found, for example, at the Virchow Hospital, Berlin, or Charlottenburg West End, where two rooms are provided, the linen being collected in the first, sterilised by boiling in a disinfector which is built into a glazed partition between the rooms, sorted in the second room, and then despatched to the laundry; while the third method is that employed at Munich III. and certain other South German hospitals, where the linen is collected in a special room, and placed in closed receptacles, which are transported to the basement by a lift and then by subways to the laundry.

CONSTRUCTION OF PAVILIONS.

The walls are generally constructed of brick, usually solid, hollow walls being the exception, and are very often rough-cast externally. There is usually a complete open basement, which contains the heating and ventilating apparatus. Floors are invariably fireproof, of reinforced concrete construction, or else of brick arches on rolled-steel joists, the latter being a favourite form. Pitch roofs are steel or timber framed and covered with tiles—glazed tile, as at Munich III. and Dresden, being a favourite material. A cheaper form of roof construction much employed is that found at Hamburg Eppendorf and St. Georg, or Nuremberg, where flat timber framed roofs are covered with layers of tarred felt, asphalt-felt, or one of the prepared roofing materials, fixed down with pitch, the whole being covered with a layer of sand and a layer of gravel.

Internally the most common materials for finishing the floors of the wards with are tiles, terrazzo, or linoleum. The tiles have a dull surface and are often laid in patterns, and the

Fig. 33.—Children's Ward, the Auguste Victoria Hospital, Schöneberg.

angle between the wall and floor is rounded in tiles. The terrazzo is laid in sections, with brass strips between, so as to prevent cracking. Linoleum is now being very largely employed and is greatly favoured. Sometimes, when on an upper floor, it is laid in a layer of cork, so as to deaden the sound. The angle between the wall and floor is formed in various ways—at Frankfort Bürgerspital and Hamburg St. Georg the linoleum is turned up the wall for about six inches and the edge is closed with a special metal clip, or as at Cologne Lindenburg with a wood fillet, while in the Royal Ophthalmic Clinic, Munich, the angle is formed in terrazzo, there being a close joint on the floor between the terrazzo and linoleum. Linoleum is also very largely employed as an inlay to corridors. Wood floors are exceptional, although oak wood-block floors are occasionally found. The floors to ward kitchens and sanitary-rooms are generally laid with tiles.

The walls are generally plastered with ordinary lime plaster and all angles are rounded, external angles very often having rounded iron covering pieces to six feet above the floor. Dados to wards are sometimes formed in cement and occasionally with glazed tiles. The dados are usually oil-painted and the walls above distempered in light tones, the colours

ranging from grey to green. At Düsseldorf the dados are formed of linoleum. Ceilings are usually fireproof and distempered. In some cases decorative work is introduced on the walls, as at the Virchow Hospital, while in the children's wards [fig. 33] an appropriate stencilled frieze is often provided. In infectious diseases wards the walls are often enamel painted. Ward kitchens and sanitary-rooms usually have glazed tile dados.

The windows are almost invariably casements opening in, with fall-in fanlights over the transom, and are usually constructed of hard wood. They are usually double-glazed with an interspace of an inch or so, or else two entirely separate casements are provided with an interspace of about nine inches. In the new infectious diseases department at Hamburg Eppendorf and in the Frankfort City Hospital patent reversible sliding sash windows are employed, and at Cologne Lindenburg large mullioned windows with basement and fixed sashes are used. Window-sills are formed in various ways, of tiles, granite, marble, wood, or plaster, and the jambs are often tiled. Wood roller sun blinds are often fitted, and internally casement curtains with valances are usual.. The fanlight-openers and sash-fasteners are often of very interesting patterns. At Hamburg Eppendorf the actual glazed area per bed is 15.2 square feet, and at the Virchow Berlin it is 14.9 square feet, but the amount varies greatly in different hospitals.

The doors are usually single—double, swing, or sliding-doors not often being found. They are generally wood-panelled without mouldings, or else flush. At Düsseldorf and the Royal Charité, Berlin, linoleum-covered doors are employed. Wood door frames are exceptional, angle iron of various sections well anchored into the wall being almost invariably employed, and when the door linings and architraves are tiled an excellent door frame is obtained.

Furnishings are as simple as possible and often most artistic in design. The beds are of metal construction, wood insets at the head and foot being common, and if they do not have casters special side lifting frames are provided, so as to wheel them on to the terrace. The bed tables are constructed of glass and iron. Chairs are of metal construction or of wood. Very few cabinets or tables are found in the wards, and as far as possible they are of glass and iron construction.

OUT-PATIENTS' DEPARTMENTS.

The great out-patients' departments with waiting-halls for 300 or 400 patients, which one finds in London or in the larger English cities, are not found in Germany. There these departments, which are known as polyclinics, are attached as a rule to the University hospitals, and not to the general hospitals, while large numbers of out-patients are treated in the numerous private polyclinics which one finds in almost every street. Generally speaking, in University hospitals a polyclinic is attached to each clinic, so that instead of a common waiting-hall, as in England, for medical, surgical, children's, gynæcological, etc., cases, a separate waiting-hall has to be provided for each department.

Some of the finest examples are the polyclinics of the Royal Charité Hospital, Berlin, among which the surgical polyclinic attached to the surgical clinic comprises a central waiting-hall, opening off from which are examination, operation, and treatment rooms, while in the basement are special massage and bath-rooms; the nose, throat, and ear polyclinic is again very complete and well equipped, as is the neurological polyclinic, the children's polyclinic, and the light institute. The new medical polyclinic which is to be shortly erected will also be most complete.

At Munich the ophthalmic and psychiatrical polyclinics, both attached to their respective clinics, are very fine, and at the St. Georg Hospital, Hamburg, very complete polyclinics for surgical, ophthalmic, and nervous diseases, and throat, nose, and ear diseases are found.

As a rule in the design of the polyclinics separate return ways for patients are not provided, while when room does not admit of a separate building and in very many cases for preference, there is no hesitation in placing one or two stories of wards over the polyclinic.

OPERATION-HOUSES.

As a rule each surgical pavilion is provided with a room fitted up as a small operating theatre, in which all examinations, dressings, bandaging, and minor operations can be performed, while the operating theatres proper for the major operations are grouped together in one block, known as the operation-house, which is placed in the centre of the surgical department between the men's and women's sides, and situated if possible close to the entrance to the hospital so that accident cases may be received direct from the ambulance-wagon and promptly attended to.

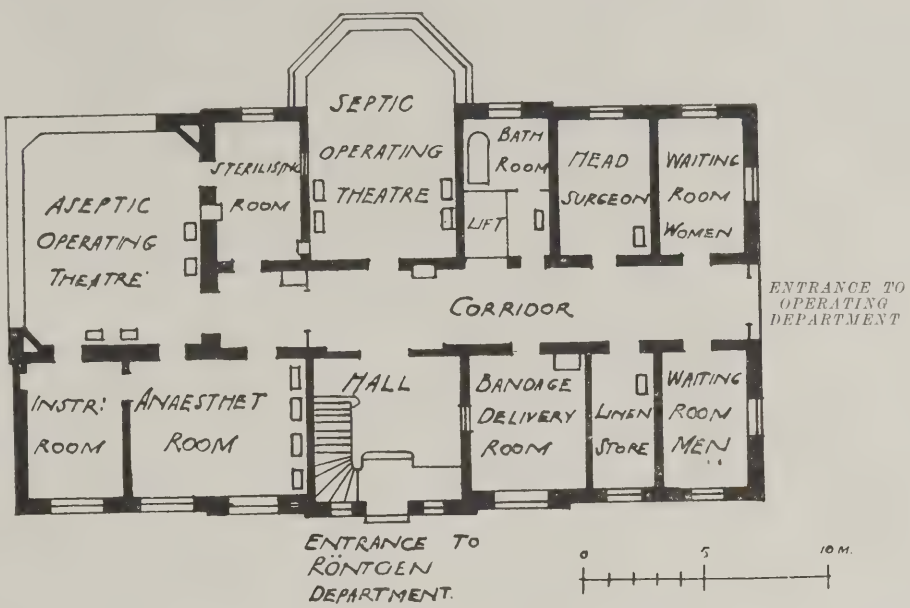


FIG. 34.—GROUND FLOOR PLAN OF THE OPERATION HOUSE, HAMBURG ST. GEORG.

The former tendency to keep the operation-house entirely separate and detached from the pavilions, as at Hamburg Eppendorf and St. Georg, the Moabit, Am Urban, or Nuremberg, is passing away, and the latest hospitals show it connected to the pavilions by closed corridors, so as to obviate the transport of the patients through the open, which in bad weather becomes most difficult and causes considerable inconvenience to the staff.

Two sets of operating rooms are usually provided for aseptic and septic cases respectively, and a strict separation is maintained between them.

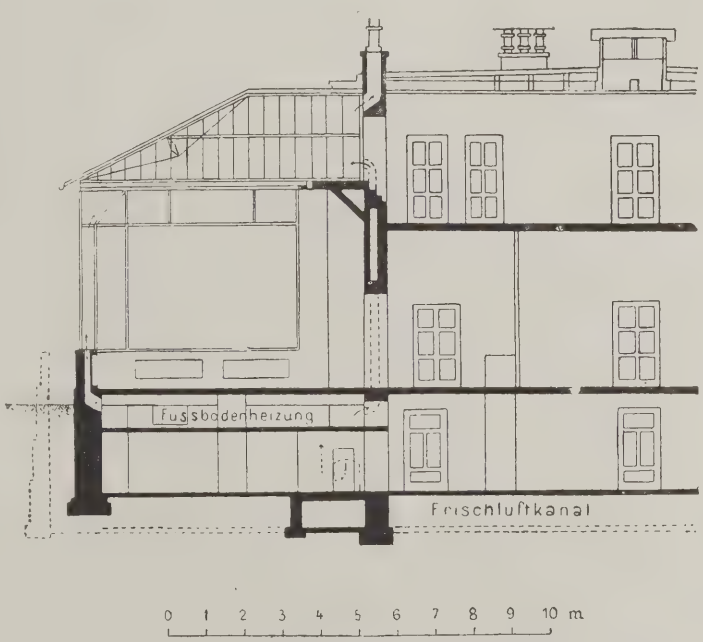


FIG. 35.—SECTION THROUGH THE ASEPTIC OPERATING THEATRE, HAMBURG ST. GEORG.

One of the finest of the modern German operation-houses is found at the St. Georg

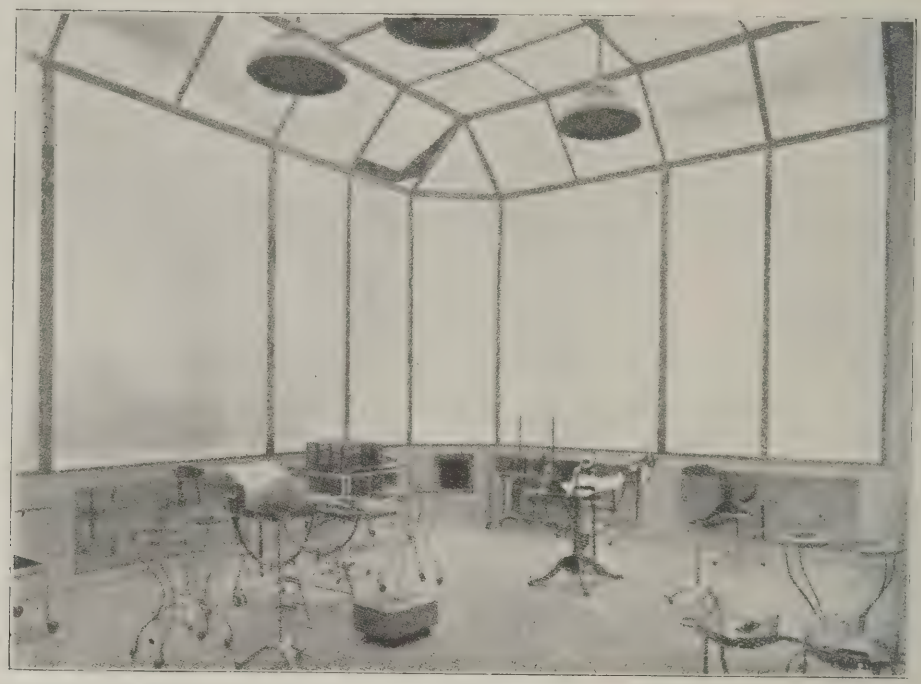


FIG. 36.—THE ASEPTIC OPERATING THEATRE, HAMBURG ST. GEORG.

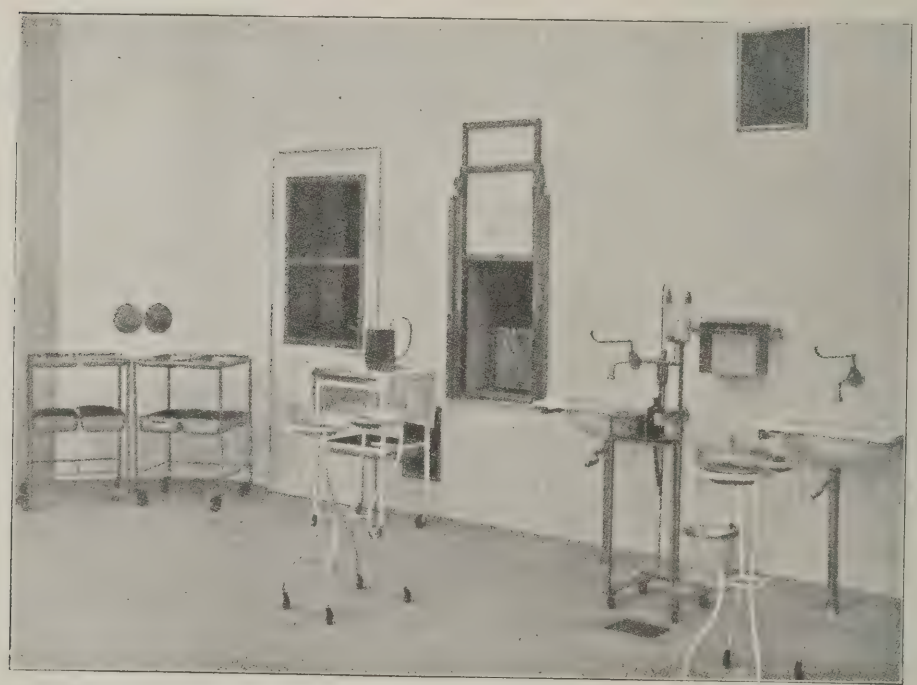


FIG. 37.—THE ASEPTIC OPERATING THEATRE, HAMBURG ST. GEORG, VIEW OF WALL TO THE STERILISING ROOM.

Hospital, Hamburg. It is a detached block [figs. 34 and 35] situated in the centre of the surgical department between the men's and women's sides and close to the main entrance to the hospital. The entrance to the operating department is protected by a glazed shelter for the ambulance-wagon, and the central corridor gives access to the rooms, which comprise waiting-rooms for men and women, head-surgeon's room, patients' bath-room, linen and bandage rooms, the septic operating theatre, and the aseptic operating rooms, comprising the theatre, anæsthetising, sterilising, and instrument rooms, this latter series of rooms being separated from the former by a glazed screen across the corridor.

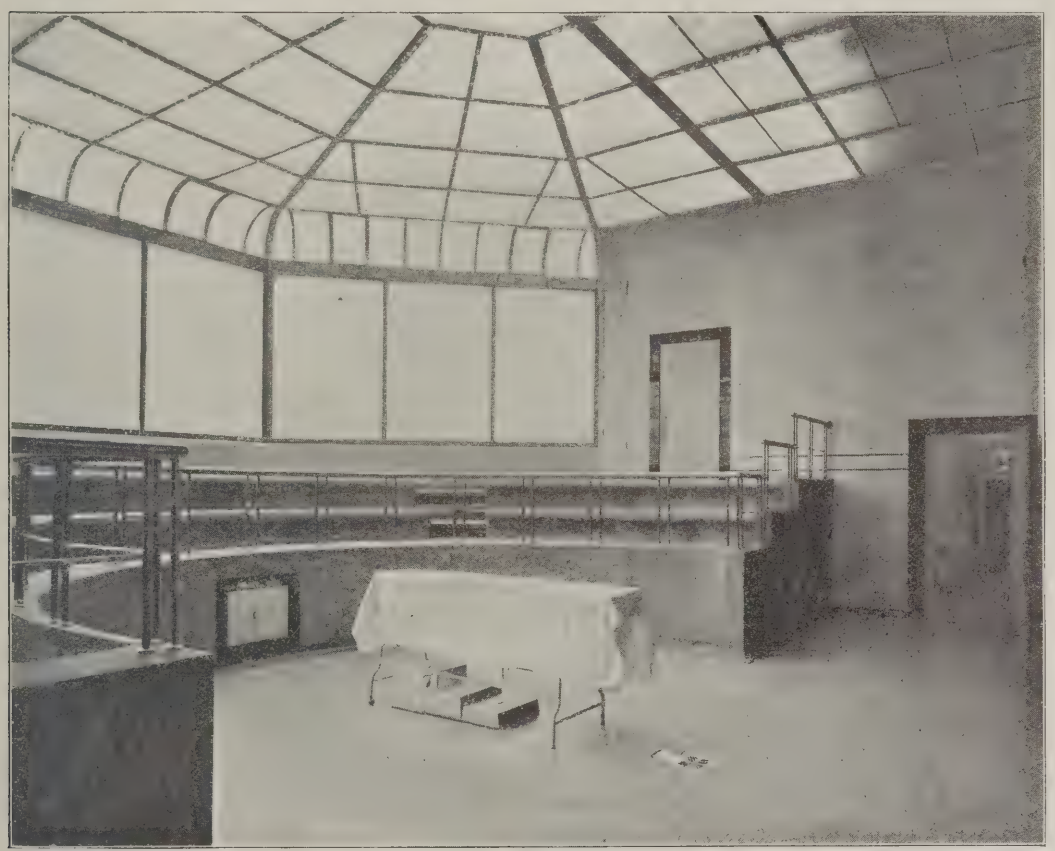


Fig. 38.—Operating Theatre, Düsseldorf General Hospital.

The aseptic operating theatre [fig. 36] is reserved only for completely clean operations, the doctors and nurses taking the greatest sterile precautions and wearing rubber shoes and sterilised caps and gowns. It is 27 feet long by 23 feet wide and 16 feet 6 in. high, and has two sides and the ceiling completely glazed. The floor is of tiles which slope to floor traps, and the walls are covered with white glazed tiles. The glazing is double of obscure plate-glass in nickel-plated steel frames, with an interspace of 20 in. or sufficient to allow a man to clean the glass without entering the theatre.

In order to prevent the theatre cooling and to prevent condensation on the glass, owing to the great glazed surface, what is termed a "mantle" heating is employed, by which the whole room is surrounded as it were by a mantle of hot air. Warm air passes from the heating chamber under the floor and up between the double glazing in the glazed sides, and in ducts

on the wall sides into the overlight space, from whence it returns by angle ducts to the heating chamber, where it is warmed again and the process continued. In addition to this heating, radiators are placed below the window-sills in recesses which are closed with flush nickel plates, and as again the fresh air for ventilation is warmed before entering, the theatre even in the coldest weather can be kept at a temperature of 86° Fahr.

For the ventilation of the theatre a mechanical system is employed with a special sand-filter, for which it is claimed that it renders the air almost germ free. The artificial lighting is obtained from three pendants suspended from the ceiling with Osram lamps, the total lighting obtainable being 3150 c.p. The fittings comprise four lavatory basins [fig. 37], which are of white faïence bracketed from the walls, each resting on four points only, while the supply is combined hot and cold with elbow-action fittings and knee-action waste. The two basins to the sterilising room wall are supplied with sterilised water at the supply temperature. The remaining fittings are all moveable and of the latest patterns.

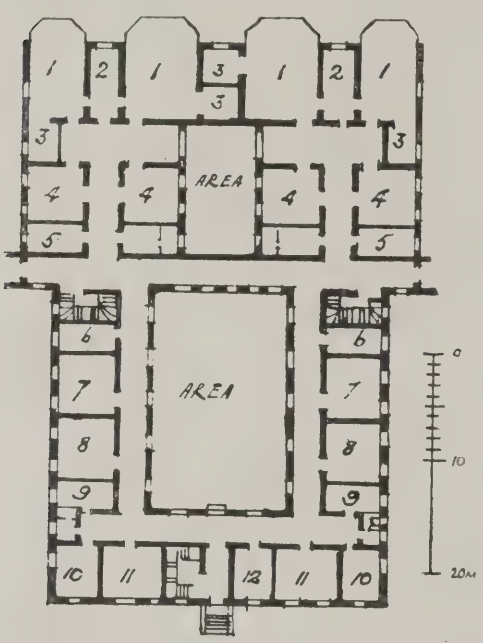


Fig. 39.—Ground Floor Plan of the Operation House, the Virchow Hospital, Berlin.

1, Operating Theatre. 2, Sterilising Room. 3, Instruments. 4, Anæsthetising Room. 5, Cloak Room. 6, Linen. 7, Plaster Bandaging. 8, Microscopical Room. 9, Apparatus. 10, Surgeon. 11, Director. 12, Attendant.

The whole theatre can be washed down, a hose and piping being provided for the purpose, and in addition steam can be turned into the room, causing all floating particles to descend.

The septic operating theatre, which is used for all unclean and suppurating cases and for large bandage changings, is lighted by a glazed bay with overlight, and is similar in its construction and fittings to the aseptic theatre, with the exception that filtered air is not provided.

On the first floor of this block is the plaster bandaging room, nurses' rooms, and the Röntgen department, access to which is had by a separate entrance and staircase.

At the Düsseldorf General Hospital [fig. 38] the operating theatres are contained in the surgical clinic, which is planned on the corridor system, with two internal areas. The theatres are three in number, one being used for septic and one for aseptic operations, and the other for bandage and clinical work. Three rows of seating in terrazzo are provided for the accommodation of students, who enter by a separate staircase from their cloak-room in the basement. The floor is of terrazzo, sloping to the central floor trap, and the walls have a glazed tile dado, above which the plaster is enamel painted. The glazed area is very great, and a complete overlight is provided. The heating is by a " mantle " system, as at St. Georg, Hamburg. Here, however, no system of mechanical or natural ventilation is employed, the room prior to the operation being flushed with fresh air by opening the casement windows, which are then closed, and the room brought to the required temperature, after which the operation is performed in an absolutely still atmosphere, so that all air currents or movements of dust are avoided. This method of operating in a perfectly still atmosphere is also employed at the Virchow Hospital, Berlin, Charlottenburg West End, and Schöneberg, and is now being largely adopted. The lighting is by electric arc-lamps suspended in the overlight space and provided with large reflectors. This, again, is a very prevalent system of lighting the German operating theatres, as all exposed lighting fittings are avoided. The

theatre itself contains no fittings of any description beyond the operating table, separate rooms being provided for doctors' and nurses' ablutions, anæsthetising, sterilising, etc., and this tendency also to remove all fittings from the theatres is found in many hospitals.

At the Virchow Hospital, Berlin [fig. 39], the operation house is situated in the centre of the surgical department, and is connected to the two adjoining pavilions by a closed corridor, these two pavilions being used for the more serious cases before and after the operation, while the other patients are transported to and from the operation house in the open.

FIG. 40.—GROUND FLOOR PLAN OF OPERATION HOUSE, CHARLOTTENBURG WEST END.

1, Cystoscopy and Laryngoscopy. 2, Director. 3, Entrance. 4, Accident Bath Room. 5, Cleaner and Staff W.C. 8, Women's Waiting Room. 9, Men's Waiting Room. 10, Surgeon. 11, Nurse's Room. 12, Röntgen Room. 13, Anæsthetising Room. 14, Aseptic Operating Theatre. 15, Sterilising Room. 16, General Operating Theatre. 17, Instrument Room. 19, Surgeon's W.C.'s. 20, 21, Sink and Disinfecting Room.

The block contains two completely separate suites of rooms, one for each head surgeon. Those rooms directly relating to operation work are kept to one side of the corridor, so as to be as quiet as possible. The two theatres in each department are of similar form, and it remains with the surgeon which he uses for septic and which for aseptic work. On the first floor of the block are bandage, preparation, etc., rooms, museum, and nurses' and attendants' rooms.

Charlottenburg West End [fig. 40] shows an operation house connected by a closed corridor to the pavilions of the surgical department. To the front of the corridor is the

entrance approached by a ramp-up for the ambulance wagons, the bath-room being used for the reception of serious accidents, which are sent direct to the operation house. To the rear of the corridor are the staff-rooms, waiting-rooms, and anæsthetising- and Röntgen-rooms, whilst disconnected from these latter by a through ventilated corridor are the operating rooms. Provision is made here as in the pavilions for the disinfection of the dirty linen before its conveyance to the laundry. On the first floor are the laboratories and the theatre sisters' apartments.

Cologne Lindenburg [fig. 41] shows another type of the operation house, connected to a closed corridor. The operating rooms are disconnected from the remainder by a glazed screen across the central corridor. The large clinical operating theatre, with two anæsthetising rooms adjoining, contains seating for ninety students, who enter by a separate stair. The tiers are constructed of reinforced concrete, and covered with terrazzo, smooth tip-up wood seats with arm desks being provided. The artificial lighting of the table is by a special

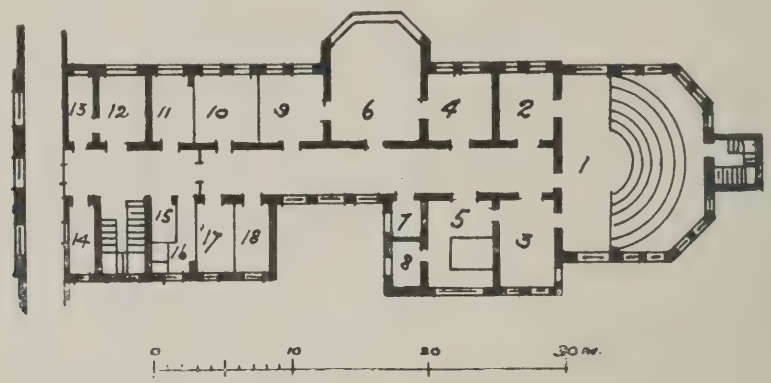


Fig. 41.—Ground Floor Plan of the Operating House, Cologne Lindenburg

1, Clinical Operating Theatre. 2, Anæsthetising Room for Men. 3, Anæsthetising Room for Women. 4, Sterilising Room and Surgeon's Lavatory. 5, 8, Room for operations in reduced pressure. 6, Aseptic Operating Theatre. 7, Bath Room. 9, Anæsthetising Room. 10, Plaster Bandaging Room. 11, Recovery Room. 12, 13, Head Surgeon. 14, Porter. 15, Bed Lift. 16, Water-closets. 17, Patients' Waiting Room. 18, Linen Room.

projecting lamp outside of the theatre with reflecting mirrors, a system often employed in the German clinics. The whole theatre can be darkened and slides projected. A special apparatus for operations in reduced pressure is provided in a separate room. The aseptic theatre is lit by a double-glazed steel bay with an interspace of eight inches. For ventilation the air passes from outside, through radiators, up between the double glazing, and into the room about three feet below the ceiling, the inner glazing stopping at transom height. Extract vents to the roof for the foul air are provided at floor level in the opposite wall. Similar ventilation is provided in the clinical theatre, with in addition vents six feet above the rear row of seating for the inlet of fresh warmed air. Lavatories for the surgeons are provided in separate rooms to the theatres. The floors and dados throughout are tiled. On the first floor are the scientific rooms, the Röntgen Institute, and the staff apartments.

Other fine operating blocks occur at Hamburg Eppendorf, Nuremberg, Dresden Johannstadt, Munich III., etc., and in the Surgical Clinics at the Royal Charité, Berlin, and at Greifswald very complete clinical operating theatres are found.

(To be continued.)

REVIEWS.

UNDERGROUND JERUSALEM.

Underground Jerusalem : Discoveries on the Hill of Ophel (1909-1911). *By H. V. (of the Ecole Biblique et Archéologique in Jerusalem).* 4*o. Lond.* 1911. 7*s.* 6*d. net.* "Field" *Office, Bream's Buldings, E.C.*

The book now published under this title gives the archæological results of an expedition the original objects of which need not be discussed. It suffices to say that from the time when its members gave access and encouragement to the learned author their excavations began to have value for the archæology of Jerusalem ; and all those who have any knowledge of the subject will agree that to no man more competent or more scrupulous could such opportunity have been afforded than to Père Vincent of the Ecole Biblique et Archéologique in Jerusalem. The record of these laborious works were published in French, the author's own language, and now, very promptly, in English for the *Field*, in which journal considerable portions of the text and some of the illustrations have appeared during the last few months—and it should be noted that the translation is excellent.

The excavations described lie in the Hill of Ophel, the spur which lies immediately south of the Haram enclosure and of which the eastern slope borders the Kedron Valley—tapering southward. For many years past it has been recognised that on this spur was built the ancient "Jebus," and that here, too, lay the "City of David." Nor must it be supposed by the reader that the tunnelled aqueduct has itself been a recent discovery. It was known to the seventeenth century writer, Quæresimus ; Robinson measured its length in April 1838 ; Barclay and Wilson both visited it, and Warren surveyed it in December 1867. The plan is included in his published survey.*

Singularly enough, the most important discovery connected with it was made by a lad, a pupil of the late Herr Schick, who, scrambling through the tunnel fell into the water, and, when picking himself up, noticed writing on the wall which proved to be the famous "Siloam inscription" describing the making of the tunnel from the two ends. The style of the writing indicated that it belonged to a period not later than that of Hezekiah. This discovery was made in 1880. In November 1881, Conder, accompanied by Mantell and the late Mr. Armstrong, revisited the tunnel, and, recognising its importance in view of the decipherment of the inscription, repeated his visit later in the same month.† He reported that little more could be done until the accumulated débris could be cleared out, but the water was lowered with the object of more careful search, and he again measured the length.

Warren's survey has been used for the purposes of the expedition under consideration—both plan and complete section of the Siloam tunnel. Indeed Plan V. is a reproduction of these, and one must remark that in all the plans the distinction between what had already been surveyed by the Palestine Exploration Fund and such of the small branch tunnels as were opened and surveyed by this recent expedition is not made sufficiently clear.* The reader who has not already informed himself on the subject would be apt to suppose that much more was due to the expedition now described than is, in fact, the case. Captain Warren's survey was very thorough, and his research as to various branches of the tunnellings, conducted at much personal risk, with much difficulty, and with limited means, showed how numerous were these workings and how evidently they had been carried out at different times and had in many cases superseded one another ; but it would need much patience, and more plans than are available, to effect a complete comparison between his examination and these more recent excavations—the more so that the references from text to plans are in this book extremely difficult to follow. The reference lettering varies in the different plans, and it is not always certain to which plan reference is made. What is clear is that, over many centuries, it was regarded as important to secure this water supply to Jerusalem in case of attack ; that the means of doing this underwent changes at various epochs ; and that all evidence goes to confirm the opinion that the Siloam tunnel itself was worked from both ends, as commemorated in the inscription discovered in 1880, and is probably the work of Hezekiah alluded to in 2 Chron. xxxii. 30, unless it be (as Prof. Sayce thought) still older.† Perhaps the most important result of the 1881 discovery was the certainty that a written Hebrew character was in familiar use by the Jews in the time of their monarchy.

It is in connection with this record of *how* the tunnel was made, that evidence as to its antiquity becomes important ; and what archæologists will value in this memoir of the recent excavations is the accurate representation of the pottery found. There are, at the end of the book, ten plates illustrating this, three of them being coloured plates, and the examples shown are sufficient for an expert to form his opinion as to the periods they represent.

It must be admitted that the detailed descriptions of the first two chapters, set forth in double columns of small type, are difficult reading : but in the third and final chapter the author sums up his deductions from what he has seen. In these he seems to write more freely, and the last ten pages of the book are, to any ordinary reader, the most interesting. In the opening chapter Père Vincent deplores certain "misunderstandings" as to the objects of these explorers. If they have been misunderstood they have themselves only to blame. When a party of

* See also Warren's *Recovery of Jerusalem*, pp. 238–256.
† *P. E. F. Quarterly Statement*, 1882, pp. 122–131.

* Herr Schick discovered another channel in 1881.
† *P. E. F. Quarterly Statement*, 1881, pp. 146–149.

strangers arrive who, having obtained permission through some unusual channel, set to work in profound secrecy, surround themselves with mystery, those who know anything of the East will feel no surprise that their objects were mistrusted. They were fortunate in making a friend of the author.

J. D. Crace, F.S.A. [*Hon. A.*].

HOUSING AND TOWN PLANNING.

The Memorandum issued by the Local Government Board, setting out the progress made in bringing into operation the Housing, Town Planning, etc., Act of 1909, is a notable Paper. Referring to the Housing part of the Act the paper reports that Regulations have been issued by the Local Government Board which require definite arrangements to be made by the Local Authority for a thorough inspection to be carried out from time to time according to the various needs or circumstances of the dwelling-houses or localities in the district of the Local Authority, and the keeping of records as to the condition of each house inspected; also for the periodical submission of these records to the Local Authority for direction to be given as to what action shall be taken and the inclusion in the annual report of the Medical Officer of Health of a statement in regard to the work of inspection and any action taken thereon.

These Regulations have only been issued for a little more than a year, but the Board gather from information supplied that in most districts the necessary arrangements have been made for giving effect to them, and there can be little doubt that, if this inspection is properly carried out, it should provide accurate knowledge and stimulate suitable action.

Under Section 15 of the Act, which extended the obligation of a landlord and makes him responsible for seeing that small houses are in all respects reasonably fit for human habitation during the tenancy, as well as at its commencement, action has been taken by about 400 Local Authorities, and altogether notices have been given with regard to nearly 19,000 houses. There is also a striking increase in local activity in dealing with insanitary property; whereas in 1908 to 1909 6,000 representations were made in regard to the closing and demolition of houses, in 1910 to 1911 the number was approaching 24,000.

While these figures may not seem large in proportion to the number of houses which require attention, it must be borne in mind that the additional powers given by the Act will have had the effect of stimulating the owners of cottages to deal with them without waiting for notices under the Act, and it is therefore reasonable to suppose that the total improvement will be considerably more extensive than the figures, dealing with the action taken, would show.

It will be seen from the extracts printed below, which deal largely with Part II., the Town Planning Section of the Act, that a substantial beginning has been made in this work also. It is known that some of the eight Councils which have successfully passed through the preliminary stages and have received authority to prepare schemes have these schemes in an advanced state and will probably be submitting them shortly, and as soon as two or three of these are through the final stages it is probable that other Local Authorities will be more ready to take action.

Town Planning is new work to the English Councils. It opens up a hundred new problems, and it is not to be wondered at that some time is occupied in getting the Act under way.

One regrets to see that many towns where the need of town planning is certainly urgent are absent from the list. In the South Wales mining districts, and indeed in the mining districts in other parts of the country, new pits are being sunk and new centres of population are springing up which very badly need the guidance of a town planning scheme.

It is noticeable also that there is no mention of the London County Council taking action in reference to the County of London, although the districts around are numerously represented in the list of those preparing schemes. It will be a somewhat curious result of the Town Planning Act if the London County Council waits to take action for the town planning of London until the greater part of outer London has already assumed a stereotyped form under the town plans of the many districts. Unless the London County Council takes up its responsibilities under this Act there would seem to be no satisfactory way of securing the proper development of London except by creating a new town planning authority for Greater London, on the lines of the Metropolitan Commission for Greater Boston, and having powers analogous to those recently created for dealing with Greater Berlin by the German Government.

The position in London hardly reflects credit on English management of public affairs. We have the London County Council, who alone can take action under the Town Planning Act; we have had a Royal Commission on London Traffic; we have a Traffic Branch of the Board of Trade, who issue year by year most valuable reports, but who have no power themselves to take action and who report to a Board who are equally powerless to act.

In addition to these we have a Road Board, who have some money to spend but who have no connection whatever with the Traffic Branch that is collecting statistics and issuing reports. We have finally the Local Government Board, who are responsible for the Town Planning Act and who again have no direct connection with either the Road Board who have power to spend, or the Traffic Branch of the Board of Trade who collect information.

Meantime a comparison of the plans contained in the Report of the Traffic Branch of the Board

of Trade issued last week with those contained in the Report issued in 1910 reveals the enormous extent to which the population of London is settling in the areas outside the County of London, and indeed reveals that the London County Council now controls only a fraction of the area of London proper, and suggests the very urgent need of some extension of the County Council's powers or the creation of some new body to control the development of Greater London and to prevent the perpetuation in the outer ring of all the evils which the last century created in the inner ring. Certainly the inaction of the London County Council hitherto in regard to the Town Planning Act would seem to suggest that the creation of a new body to deal with this problem would be the wisest course. At any rate it is to be hoped that Parliament, having passed Mr. John Burns's Bill, will see that it is not allowed to become a dead letter for the city which perhaps of all others has the greatest need for its benefits.

Mr. Burns is to be congratulated on the progress already made, and if he has proper support from Parliament and the people he will probably find some way of dealing with the great problem presented by the city of London.

RAYMOND UNWIN [*F.*].

The following extracts from the Local Government Board Memorandum relate particularly to town planning, and, after recording the steps taken by the Board to make known among local authorities the objects and provisions of the Act, give particulars of proposals for schemes of cases in which notices have been given, and of other cases in which proposals are under consideration:—

The powers conferred by Part II. of the Act of 1909 in regard to the control of the development of land by means of town planning schemes are very extensive, and the application of the new powers to the circumstances of different localities must naturally be the subject of careful consideration by the local authorities. The Act, while creating a new relationship between owners and local authorities in connexion with the development of land, contemplates the co-operation of one with the other for the purpose of promoting the general interest. Co-operation and agreement are important features in connexion with the preparation of any town planning scheme which is to be both successful and economical, and it follows that in many cases much time will be necessarily absorbed in negotiations preliminary to the stage at which formal application is made for the Board's approval of the preparation of a scheme. Abundant evidence is forthcoming as to the widespread interest which is taken in the subject. The many conferences which have been held by local authorities, architects, engineers, surveyors, &c., and the holding of public meetings in various localities, all testify to this fact; and looking to the novel character of the legislation and the procedure under it the Board may regard the progress hitherto made under it with satisfaction.

Some information is given below as to a number of local authorities who have taken definite action with a view to the preparation of schemes under the Act, and there is reason to believe that in some cases better methods of developing estates are being adopted by landowners and others without the formalities of town planning schemes, and that the existence of the powers of the Act has already had a very beneficial influence quite apart from the actual preparation of schemes under it.

On the 31st December 1909, the Board issued circulars and memoranda explaining in some detail the objects and provisions of the Act in regard to town planning. These were sent to every local authority for the purposes of Part II. of the Act.

On the 3rd May 1910, the regulations required to be made under section 56 of the Act were issued. These regulate generally the procedure to be adopted with respect to the preparation or adoption of town planning schemes by local authorities. They were drawn strictly in conformity with the requirements of the Act, and on the lines of indicating fully every step to be taken in the several stages of a scheme; but, as it was probable that the circumstances of particular cases might be such as to require or justify some relaxation of the regulations in their application to the case, the Board took power to grant dispensations in respect of the carrying out of the regulations so far as admissible without contravening the Act. This power has been exercised in certain respects in cases which have already come before the Board.

Every opportunity has been given to local authorities to confer with officers of the Board, and interviews for the discussion of points on which the authorities or their officers desire the Board's assistance are almost of daily occurrence.

Section 54 (2) of the Act provides that the Board (1) may authorise a local authority to prepare a town planning scheme with reference to any land within or in the neighbourhood of their area if the authority satisfy the Board that there is a *prima facie* case for making such a scheme, or (2) may authorise a local authority to adopt with or without any modifications any such scheme proposed by all or any of the owners of any land with respect to which the local authority might themselves have been authorised to prepare a scheme.

In the following eight cases the Board have given authority for the preparation of schemes, viz.:—

Birmingham Corporation.—An area of about 2,320 acres in Quinton, Harborne, and Edgbaston in the city, and in the part of Northfield in the Urban District of King's Norton and Northfield added to the city as from the 9th November 1911.

Birmingham Corporation.—An area of about 1,442 acres in the Parish of Aston, in the eastern part of the city.

Ruislip-Northwood Urban District Council.—An area of about 5,906 acres in the urban district and in the Parish of Rickmansworth (Rural) in the Rural District of Watford.

North Bromsgrove Urban District Council.—An area of about 554 acres in the urban district.

Rochdale Corporation.—A small area of about 43 acres in the borough.

Chesterfield Corporation.—A small area of about 64 acres in the borough.

Oldbury Urban District Council.—An area of about 1,763 acres in the Warley portion of the urban district.

Bournemouth Corporation.—An area of about 202 acres in the Boscombe East and Southbourne Wards of the borough.

In one case, that of an application from the Corporation of Rochester relating to a very small area, the Board were unable to give the authority asked for as the land was for the most part held by the Secretary of State for War, and being Crown lands could not be included in a town planning scheme.

The Board have before them at the present time two applications for authority to prepare schemes, viz. :—

Hanwell Urban District Council.—An area of about 198 acres in the urban district.

Liverpool Corporation.—An area of about 88 acres near the eastern boundary of the city.

Before an application can be made to the Board for authority to prepare a scheme, or to adopt a scheme prepared by owners, certain procedure under the procedure regulations above referred to must be taken, including the giving of notices to persons interested and the holding of a preliminary conference with such persons. The Board have information showing that the preliminary notices have been given under the regulations by the following 11 local authorities with a view to application being made to the Board for authority to prepare or adopt schemes, viz. :—

Barrow-in-Furness Corporation.
Ellesmere Port & Whitby Urban District Council.
Finchley Urban District Council.
Huddersfield Corporation.
Middleton Corporation.
Nelson Corporation.
Newcastle-upon-Tyne Corporation.
Sheffield Corporation.
Sutton Coldfield Corporation.
Twickenham Urban District Council.
Willesden Urban District Council.

As regards the case of Middleton the proposal is one for the adoption by the local authority of a scheme prepared by the owner. The matter has been before the Board but certain further procedure was necessary before the proposal could be regarded as a formal application for authority to adopt the scheme.

In 22 other cases the information available would seem to show that the consideration of the matter by the local authority has reached a stage practically equivalent to a decision to proceed with a scheme, viz. :—

Acton Urban District Council.
Barnes Urban District Council.
Beckenham Urban District Council.
Blackburn Corporation.
Cleckheaton Urban District Council.
Croydon Rural District Council.
Greenford Urban District Council.
Grimsby Rural District Council.
Halifax Corporation.
Hayes Urban District Council.
Kingston-upon-Hull Corporation.
Maldens (The) & Coombe Urban District Council.
Merton Urban District Council.
Middlesbrough Corporation.
Portsmouth Corporation.
Sedgley Urban District Council.
Southall-Norwood Urban District Council.
Southport Corporation.
Stockport Corporation.
Surbiton Urban District Council.
Walthamstow Urban District Council.
Warrington Rural District Council.

In numerous other cases the Board are aware either from correspondence or interviews with their officers that the question of preparing a scheme is under consideration, and the following 28 local authorities may be mentioned in this connexion :—

Birkenhead Corporation.
Bushey Urban District Council.
Carshalton Urban District Council.
Coventry Corporation.
Croydon Corporation.
Enfield Urban District Council.
Epsom Urban District Council.
Esher and the Dittons Urban District Council.
Hale Urban District Council.
Hendon Urban District Council.
Herne Bay Urban District Council.
Hessle Urban District Council.
Irlam Urban District Council.
Leek Urban District Council.
Little Crosby Urban District Council.
Newport (Mon.) Corporation.
Northwich Urban District Council.
Richmond (Surrey) Corporation.
Rotherham Corporation.
Southgate Urban District Council.
Stoke-on-Trent Corporation.
Stretford Urban District Council.
Sutton (Surrey) Urban District Council.
Tynemouth Corporation.
Wakefield Corporation.
Wallsend Corporation.
Wembley Urban District Council.
York Corporation.

In some of these cases special committees have been appointed by the local authorities to consider proposals for schemes, and in others conferences are being arranged with owners or neighbouring local authorities, or plans of areas are being prepared for preliminary consideration. The indications are that in many of these cases schemes will eventually be prepared.

The foregoing lists of local authorities relate only to some of those with which the Board have had formal correspondence on the subject of town planning schemes, or in regard to which they have received information by means of interviews with their officers or otherwise that the question of preparing schemes was under consideration. There can be little doubt that many other authorities are contemplating town planning schemes, but have not yet found it necessary to communicate with the Board on the subject.

9 Conduit Street, London, W., *9th Dec.* 1911.

CHRONICLE.

Mrs. Arthur Cates's Gift of Photographs.

Members who attended the Business Meeting last Monday had the advantage of seeing the large and important collection of photographs of architectural subjects which the late Mr. Arthur Cates collected during his journeys on the Continent, and which has lately been presented to the Institute Library by Mrs. Cates, together with a mahogany cabinet in which to preserve them. The portfolios were exhibited on tables which occupied all the wall space of the East Gallery. These, together with Mr. Cates's bookcase containing his valuable architectural library, are now placed in the vestibule leading to the rooms of the Institute Library. The photographs are all to a large scale and illustrate chiefly Italian and Greek buildings either of ancient or renaissance work. There are also two large portfolios of the buildings, or their decorative features, of Constantinople, and an interesting collection of Egyptian subjects, as well as the buildings of Palestine and cities of the farther East. Marseilles is the only French city represented in the collection, and Nuremberg the only German. The buildings of Rome, Florence, Perugia, Venice, Fiesole and Naples are amply illustrated, while three large portfolios are devoted to the work of Greece. The photographs are available for inspection and the Librarian hopes presently to have a catalogue of them prepared for the convenience of members. The President of the Institute proposed a vote of thanks to Mrs. Cates for her valuable gift, which was warmly endorsed by the meeting. A vote of thanks was also passed, on the motion of the President, to the Librarian of the Institute, Mr. Rudolf Dircks, through whom the presentation had been made.

Teaching of Architecture in Public Schools.

A recent number of the *American Architect* announced that the Board of Education of Los Angeles, California, contemplated inviting certain architects of that city to submit tentative plans for organising an architectural department in the public schools. That architecture should have its place as part of a liberal education has often been insisted upon in Papers brought before the International Congresses of Architects and similar gatherings. It has even been recommended that schools of every kind should be compelled to teach elementary architecture. Mr. T. G. Jackson, R.A., in a Paper on the Education of the Public in Architecture at the Congress of 1906, truly says that in none of the arts is a correct judgment on the part of the public more necessary than in that of architecture. "One cannot walk down a street," he says, "without being vexed or pleased with the buildings that line it. To have to pass a hideous structure or a row of ugly houses in their daily walk is a penance that the neighbours have to put up with whether they like it or not. . . For the mental torture which we are thus obliged to suffer no doubt we have in justice and in the first place to thank the architect; but ultimately the blame must rest with his employer, who approved the design and paid for its realisation in brick and stone. Had he not been ignorant of the elements of good design in architecture and careless about them we should not have been called upon to suffer." The late Lord Leighton, addressing the first National Congress for the Advancement of Art, observed: "You cannot too strongly print this on your minds, that what you demand that you will get, and according to what you accept will be that which is provided for you." There can be no doubt that if the cardinal principles of good design and construction were instilled into the minds of the youth at our schools they would be able eventually to discriminate between what is good and what is bad in art; a valuable aid would thus be secured towards the advancement of good architecture, and a higher and broader view obtained of those features that contribute to the upbuilding and development of our towns and cities.

Architectural Copyright.

The Copyright Bill was read a third time in the House of Lords on Tuesday, and now only awaits the Royal assent to become law. On Clause 5, which, subject to two exceptions, enacts that the author of a work shall be the first owner of the copyright therein, Lord St. Aldwyn had moved as an amendment the following additional exception:—"Where, in the case of an architectural design or drawing for the erection or restoration of any building, the design or drawing was ordered by some other person and the author was paid for superintending such erection or restoration, then in the absence of any agreement to the contrary, the person by whom such design or drawing was ordered shall be the first owner of the copyright."

Viscount St. Aldwyn said it seemed to him very doubtful whether architects ought to have been admitted to copyright at all. The profession was by no means an ill-paid one, but, as the Bill now stood, in such a case as was contemplated by his amendment, if the employer who had fully paid the architect for his work desired to repeat that work in another building, he was

obliged to pay what he really must call blackmail to the architect for the copyright of the design. A local authority, for example, might desire to erect cottages or artisan dwellings. They would obtain designs, and employ and pay an architect to superintend the erection of the houses. The local authority might desire to repeat the design to a very considerable extent, and if they did so they would have to pay copyright fees to the architect on every cottage or artisan dwelling erected on the same plan, whether they employed the architect again or not. This was really an additional burden to be imposed by Parliament on the cost of these houses, and in this matter the interest of the public had not been sufficiently considered, while the interest of the architect had been too much considered.

Viscount Haldane said that when the noble viscount opposite raised this matter in Committee he was struck with the individual cases which he put forward and recognised the difficulty in connection with them. He then set to work to see whether, consistently with the principle of the Bill, he could find some words which would meet those cases, but he regretted to say that after the most careful consultation with the experts, he wholly failed to do so. The Bill gave an architect a copyright which he had not had up till now. It was thought wrong that an architect should be deprived of the property in an artistic work which was the creation of his brain just as much as was the work of a painter or author unless, indeed, the person commissioning him had stipulated that the copyright should vest in him. When this Bill was passed the public would know, or could get to know, the law, and if anybody wished to have a design which he might think of reproducing hereafter, all he had got to do was to use a few words in the letter commissioning the architect saying that he wished to have the copyright of the design. The amendment, if carried, would destroy the root principle of the Bill, which was to bring in architecture as one of the fine arts for which copyright might be secured and give, at last, to architects the recognition of a right in the creation of their own brains in the same way as it was given in the case of other artistic persons.

The Earl of Plymouth was understood to express his satisfaction that the noble viscount opposite had not accepted the amendment, which, if carried, would put architects in a worse position than they were at the present moment. The effect would be to deprive the architect of the right of ever reproducing any part of a design the copyright of which had passed into the hands of some one else.

Lord Courtney of Penwith said he was afraid that Viscount St. Aldwyn's remark that the interest of the public had been neglected and that of the architect too much considered was a criticism that would apply to a good deal of the Bill. He suggested that the case put by the noble viscount might be met if it was provided that, while the architect should have his copyright, it should not be regarded as an infringement of the copyright if the person for whom the design had been produced and had employed the architect on the work used the design afterwards.

Viscount St. Aldwyn, who said he had not the least wish to place architects in a worse position than they had been under the present law, asked the noble viscount to consider the suggestion which had been made by Lord Courtney. Surely the person who had employed an architect to design cottages or artisan dwellings should be able to construct other buildings of the same kind without any further charge by the architect if he was not employed again and without there being any infringement of the architect's copyright? He thought that if the suggestion were given effect to it would be a very satisfactory settlement of the question.

Viscount Haldane said that as far as he followed the suggestion, it would be either unnecessary or unjust—unnecessary, if it was dealing with a class of houses such as cottages or artisan dwellings for the reason that in the great majority of cases there was no original design; unjust, if it was a great building, for instance, a Cathedral, that the person who ordered it should be able to reproduce the design in which there might be as much artistic and original work as in a great picture. If it were wished to keep the design in such a case it ought to be paid for.*

The amendment was by leave withdrawn.

Architectural Assistants at the Office of Works.

In the House of Commons on the 24th ult., Mr. Snowden asked Mr. Dudley Ward, as representing the First Commissioner of Works, if he was aware that there were a number of professional men engaged in the Office of Works who were termed architectural assistants and who possessed certificates of technical efficiency; that some of them were members of the Royal Institute of Architects, the Surveyors' Institution, and allied societies; that these men had been employed for many years by the Board of Works, but were still not established; and would he consider their claims to be placed on the established list?

Mr. Dudley Ward in a printed reply stated that the answer to the four parts of the honourable Member's question was in the affirmative. With regard, however, to the last section, the First Commissioner was not at all sure that there was any general desire on the part of those gentlemen who might be considered eligible to be placed on the established list, with the consequent sacrifice of income which would be demanded by the regulations.

Building Prospects in South Africa.

Recent advices from South Africa give generally a very hopeful account of the building industry in the various Provinces of the Union, and signs are not wanting that the country is gradually settling down to an era of steady prosperity. The November number of the *African Architect* says:—

One of the most satisfactory signs in regard to the material progress and prosperity of the country since the Union is the vast amount and widely spread building operations throughout the country. In the past, whenever there was any building activity, it was invariably confined to one town, with the result that that unwelcome state of affairs known as a building boom came into being; the aftermath being usually disastrous to all parties concerned.

The present condition of affairs is, however, infinitely more satisfactory, and indicates that building activity is becoming general, reports from such widely distant parts as Durban and Salisbury indicating exceptional activity.

The capital of Rhodesia has unquestionably taken firm root, and within the last two or three years has made rapid strides. The centre of a vast and fertile

* From *The Times* report.

country, the future of Salisbury promises to be exceptionally bright. Though at present the only centre where it is possible for an architect to carry on his profession, there are smaller towns which are just emerging from the mining camp stage, and which, in the course of a few years, should prove lucrative fields wherein the younger members of the profession should find ample scope for their abilities.

The various public works departments of the different Provinces have their hands full and are engaged on contracts of a multifarious nature. Both bridge building and the erection of schools are engaging a large part of their energies, for despite the enormous sums expended on the Education Department during the past eight years, there has been no diminution in the number of schools erected, contracts for no fewer than four being given out in Durban alone at a cost of £13,247. The new Courts should also add considerably to the dignity of the Natal port.

The one melancholy note is the decadence of the two most important towns of Cape Colony, Kimberley and Cape Town. The former, from a building point of view, has for many years been in a moribund state, with little likelihood of its ever recovering itself; while the metropolis has received a severe shock on account of Pretoria being made the administrative centre. The depletion of the population through exodus to the North has caused a great fall in property, and houses are being either sold or let at ruinous rates. By reason of its geographical position and the keen competition of the other coast ports, the probability of Cape Town ever regaining its pristine position as the premier town of the Union is very remote. For the time being both energy and capital have shifted northwards.

In regard to Johannesburg, contractors are extremely busy, the returns for September amounting to £237,000, as compared with £96,000 for August. The estimated cost of buildings in Johannesburg from 1st January to 31st September, inclusive, was £1,228,704. With several big contracts being put in hand before the end of the year, we can confidently look forward to a total of over £1,500,000.

The rush of diamond diggers to the dormant hamlet of Bloemhof is likely to have far-reaching consequences on that sleepy hollow, for the area of diamondiferous soil has proved far richer and more extensive than was at first anticipated, and it is estimated that there are over six thousand people at work in and around the village. It is only during the last few years that diamonds have been systematically searched for north of Christiana, and if the deposits in the Bloemhof district maintain their present promise, there is every likelihood of that town being transformed into a bustling centre, giving work to both architects and craftsmen. In any case, the importance of the deposit cannot be gainsaid, for hitherto Johannesburg has proved the sole magnet for labour, and the possibility of these rich diamondiferous discoveries widening the outlook will be welcomed by all.

The widening of the field of labour during the past two or three years is unquestionably of vast importance to the community, and, more than anything else, indicates that the country is at length settling down to an era of steady prosperity. To the traveller journeying to Pretoria, the work, both from an agricultural and manufacturing point of view, can but be deeply impressive, and the change that has taken place between these two towns is, to a greater or less extent, becoming general throughout the Transvaal. To the west of Pretoria, on the line of railway running to Rustenburg, there is a stretch of country some sixty miles in length and from ten to twelve miles in width that is in every essential equal to the finest agricultural ground to be found in the Western Province. Settled from the very earliest period of the Republic, this favoured strip is quite the most densely populated of any district in the country. With fertile soil and particularly well watered, it is possible to carry on an intensive cultivation, with the result that the farms are much smaller in extent than in other parts. Within recent years the price of land here has gone up enormously, as much as £15,000 being paid for a farm twelve hundred morgen in extent.

Instead of the miserable tenements that are to be seen elsewhere doing duty as homesteads, the farm buildings are all of a substantial and comfortable kind. Many of them, nestling among their orange groves, are unquestionably quaint and picturesque, and in the years to come the Rustenburg district will be looked upon with that affection which is now bestowed on French Hoek and Berg River Valley.

As the standard of comfort increases among our farming population, the services of architects and craftsmen will become imperative. Up to the present the farmer has been content with the most modest shelter, but signs are not wanting that this era is rapidly drawing to a close, and within a short period the skill of the architect will be requisitioned. There are sites along the Magaliesberg which, for their exquisite beauty, rival any of the most picturesque spots in the Cape Province. Formerly architects have had perforce to confine their efforts exclusively to urban buildings, but, as before remarked, the spread of wealth and refinement is rapidly gaining ground in the country, and their services will become more and more in demand in the planning of homesteads. In Australia, New Zealand, and Canada farm buildings, instead of being an eyesore, add a distinctly picturesque note to the scenery, and signs are to be seen on every hand that this happy state of affairs will not be long delayed in South Africa.

The Australian Federal City Competition.

By direction of the Council a letter has been addressed from the Institute to the principal architectural societies on the Continent informing them that the Council have had their attention called to the unsatisfactory nature of the conditions issued by the Australian Government for the competition for the New Australian Capital. The letter goes on to state that the Australian societies have issued a notice requesting their members not to take part in the competition, and that a similar notice has now been issued to the members of the Royal Institute.

Fire Prevention.

The British Fire Prevention Committee, of 8 Waterloo Place, S.W., announce that they are publishing early next year an illustrated tabular summary of the results of their official fire tests with sixty fire-resisting doors. These results cover an experimental period of twelve years, and embrace practically every type of door, from different varieties of ordinary wood and hard-wood doors to the

most modern forms of composite doors or roller shutters. Later next year they will issue a similar summary dealing with fifteen different types of fire-resisting partitions. These publications will be in addition to the Committee's usual reports and "Red Books."

Oxford Cathedral and the Civil War.

Mr. A. E. Henderson, F.S.A., writes :—"In the JOURNAL for the 11th November I notice a contribution by Mr. Francis Bond with reference to the discovery of hay in the roof of Oxford Cathedral. I discovered this while measuring the vaulting for the A.A. James Brooks' Prize in 1893. I persuaded the verger to come and see it, have it removed and analysed with a view to its dating back to the Civil War." Mr. Henderson must be the "London architect" referred to in the verger's letter communicated by Mr. Bond.

South Kensington Museum Library.

The Board of Education give notice that the Library of the Victoria and Albert Museum will be closed from 12th December 1911 to 20th January 1912 inclusive, for cleaning, relighting, and general renovation.

CORRESPONDENCE.

Certified Plans of Houses dating from before the year 1800.

Committee for the Survey of the Memorials of Greater London: 23 *Old Queen St., S.W.*

To the Editor, JOURNAL R.I.B.A.—

SIR,—The historical value of plans of old buildings which have been pulled down has often been demonstrated, and it is of the utmost importance that these records should be available for reference. Since, in most cases of demolition, surveys are made in the ordinary course of business and copies of certified plans are lodged with the District Surveyor, it is evident that a large number of these records are already in existence. May we, therefore, through your columns, ask all architects who have such drawings in their possession, or who may have occasion to make them, kindly to communicate with us, and, if possible, allow us to have tracings made for the London Collection ? At the cost of a very little trouble a most important amount of information could thus be obtained.—We are, Sir,

Yours obediently,

PHILIP NORMAN, *Chairman,*
PERCY W. LOVELL, *Secretary.*

Official Architecture.

To the Editor, JOURNAL R.I.B.A.—

SIR,—Mr. W. J. Davies, in his letter in your last number, seems to imply that certain classes of buildings—he mentioned palaces and prisons—can be much better designed in public than in private offices. It happens that many of the most satisfactory prisons have been designed by private architects. To mention three at random, Wandsworth and Birmingham, by, I think, speaking from memory, the late D. R. Hill, and the fine prison at Salford by a famous past President, the late Alfred Waterhouse, R.A. Palaces are done so seldom that they hardly count, but I think the Office of Works, to give them a word for once, could easily beat the Mall elevation of Buckingham Palace.

It is true that departments specialise, but so do many private architects. Mr. Davies mentions that the members of the staffs in public offices are fully equal in ability and experience to the majority of private architects. This may be perfectly true, but, unfortunately, the work turned out may be far below the average. Officialism has to be reckoned with. In the principal architectural department of the Government, the experience of a lifetime and the ability of a Jackson or a Reginald Blomfield might be of little use to a man if he had not entered by an examination. (The opinion of the two eminent architects just mentioned with regard to examination is well known.) Possibly, the examination which was in force when he entered has been abolished because it completely failed to sift out the right kind of men. Many examinations have been abolished, but that makes no difference: the men who have passed are "hall-marked" and thereby given the power to alter the designs of men they cannot hold a candle to, in a most heart-breaking manner.

If the President would use his influence, as suggested by Mr. Davies, to induce heads of departments to put their houses in order, he would confer an incalculable benefit on the actual working staffs of public offices, would very much increase their efficiency, and, by placing men in a position where they may use their abilities without being hampered at every move, considerably raise the architectural standard.—I am, etc.,

FAIR PLAY.

ALLIED SOCIETIES.

Northern Architectural Association.—The Opening Address of the Session was delivered by Mr. Henry C. Charlewood [*F.*], President, on the 11th November. After touching upon the affairs of the Association Mr. Charlewood said:—

The state of the building trade, in the North of England at any rate, has not shown any great improvement during the past year. Few buildings of note have been commenced, and there has been very little private enterprise except in the matter of picture halls, which seem to spring up like mushrooms in every quarter ; and, so far, prove to be very popular places of amusement. . . .

It must be acknowledged on all hands that the shipbuilding trade has revived on Tyne and Wear, and let us hope that another year will see an increased demand for bricks and mortar in all our northern towns.

In the early part of this year I happened to be in

North Wales, and, at the town of Bangor, I found plenty of building going on, though chiefly in the way of scholastic buildings, both in the new University and Normal Schools. Illustrations of the University, which was opened by King George shortly after his Coronation, have appeared in most of the building papers, and will be familiar to many ; but I should like to say that they barely do justice to the excellent work of Mr. Henry T. Hare, and they do not show the relation of the building to the town. The Corporation wisely secured the most important site in the town and presented it to the University, and the new buildings with their massive tower now dominate the whole of the surroundings, and form an important feature in a very beautiful landscape. I think it is no exaggeration to say that Bangor without its University buildings would be like Richmond in Yorkshire without its ancient castle ; and it only shows what can be done by securing the right site in a town, and putting the right building upon it.

During the year the Corporation of Newcastle co-opted two of our members to act upon their Town Planning Committee, viz. Mr. F. W. Rich and Mr. Joseph Oswald. The Tynemouth Corporation have also appointed two of our members to serve in a similar capacity, and I hope that other corporations will follow these examples and that we shall soon hear that some important schemes are being considered. The suggestions to promoters of town planning schemes lately issued by the Institute should be of considerable value to public bodies, especially in the matter of the treatment of roads and the reservation of areas for special purposes in new districts. . . .

Work in our Colonies.

As of late years a good many architects and architectural assistants have been disposed to seek employment in the Colonies, it may be of interest to call attention to what is going on in some of them.

One of our Associates, who does not wish his name to appear in print, has sent me some interesting information as to the chances of architects and the state of the building trade in Vancouver, where he has been in practice for the last three years. He commences by giving a description of his first impressions of various towns, and of life in Canada, also of the kind of buildings usually to be found there, the majority being what are known as "frame buildings," which, with the exception of dwelling houses, nearly all have flat roofs covered with three or four ply of tar paper, bedded in tar and covered with gravel. Lead is practically never used for flashings, galvanised iron being the substitute for this, and the latter is also used for eaves gutters, down-pipes, and in some of the cheaper city blocks is formed into moulded cornices, or any moulded feature where it can be used. There is a constant outlook for any new material or form of construction which may be cheaper and will answer the purpose of one previously used.

He describes the stringency of the building regulations in towns of several of the Western States, where the town is divided up into what are termed "Fire Limits," and the selection of materials and type of construction depend greatly upon what fire limit the building you wish to erect may happen to be in. He goes into this matter very fully, but I will confine my remarks to what he has to say upon the subject of Architectural Practice and the state of the Building Trade.

Architectural practice, in Western Canada at least, appears to be less of a profession than in England, for its commercial side is much more evident, and there appears to be no consistent scale of fees.

Arrangements for architectural competitions are also very primitive, and the history of some of them would show to English architects that, with all the defects of the system in England, they are in a comparatively enviable position, for professional assessors are very rarely employed in the Western Country. Estimating is done from specifications alone, bills of quantities not being customary ; but sometimes in the case of large public buildings a schedule of prices is prepared at the time of signing the contract.

There is a special difficulty to be contended with which is not found in England, viz. "lien law," which, put broadly and briefly, is that the owner of a building being erected is liable for all wages and material claims until the expiration of thirty days after the completion of the building, irrespective of what he may have paid to the general contractor on the architect's certificates. This, therefore, makes it necessary for the architect to satisfy himself that all workmen's wages and up-to-date accounts for materials have been paid.

He points out that, though there is plenty of building going on, the public are very reluctant to employ an architect, and he calls attention to some printed lists of building permits issued by the building inspector of a large Western town, which give the cost of works and the names of the architect, contractor, and owner. These lists show that out of 59 sets of plans, only 13 were prepared by architects, the remaining 46 being finished by the owner or contractor. The cost of the works ranges from £28,000 to £500.

It will thus be seen that although the total amount of building under erection in such a town may be very large, and the fact greatly advertised to assist in "booming" the town, it does not necessarily follow that there is an unusual scope for an architect.

The salaries of architectural assistants in Canada are on the average higher than in England, but the cost of living, especially in the West, is greater. The Statutory Registration of Architects is not general, but it is to be found in the provinces of Quebec, Alberta, and Manitoba, while some of the other provinces have societies working for that end. He speaks very highly of the exhaustive and thorough manner in which working drawings are prepared in some of the Canadian architects' offices, and also in some of those in the United States ; and also of the broad and masterly design of many of their public buildings, and the careful attention given to details of comfort and convenience and practical requirements.

Coming to the question of possible openings for architects and architectural assistants in Canada, he calls attention to the fact that Canada is largely an agricultural country, and her towns market centres rather than manufacturing districts, and that this must continue so for some time to come. At the present time there appears to be no form of employment (with perhaps the exception of the "labouring") in which there is a shortage of labour ; but on the other hand there are some in which the supply exceeds the demand. Yet this does not necessarily warrant anyone staying away from the country if the conditions are sufficiently understood and accepted, and he is prepared, if need be, for an entirely changed form of occupation. An architect ought to recognise the possibility that he may not at first obtain employment in his own line of work, but, on account of the general expansion and development,

opportunities will, no doubt, eventually occur for work of the particular kind he desires.

He says in conclusion: "I know of no town in Canada where architectural assistants are in special demand, except such as arises in a more or less gradual evolutionary way with the expansion of the town. In one of the largest Western cities in which there is great building activity, even beyond that of the average Canadian town, the influx of architects has been such that I personally know of several who are at present, and others who have been working, as labourers, until such time as openings occur in their own profession. Some who have done this have afterwards acquired a moderately good practice. On the other hand, I am acquainted with a fairly large number of architectural assistants who, having found no opening in architecture, have taken up work of some other kind in the building trade. Such a change is much more common here than in England." All this tends to show that the chances for a builder in the "Wild and Woolly West" are greater than those for an architect.

After giving a description of what is going on in Western Canada I should like to refer briefly to the state of the building trade in Australia.

In the *Architect and Contract Reporter* of 18th August last there was an extract from the *Melbourne Argus* which some of you may have read, giving a picture of the condition of the building trade in Melbourne, and, in fact, in most of the leading towns of Australia. We are informed that there is plenty of work for builders, but that architects are finding great difficulty in getting them to tender even for large city jobs, where there would be abundant room for high profit, while tenders have been asked again and again for important country jobs before anybody can be found willing to execute them. The difficulty appears to be caused by a dearth of efficient tradesmen to carry on the work. The number of men needed by them for certain trades would have to be doubled before they could cope with the work required to be done at the time the article was written. The trades referred to are bricklayers, plasterers, painters, plumbers, &c.

Should the building trade revive in our country, and I feel sure that it will do so sooner or later, we shall find ourselves in the same position as the architects in Melbourne are in now, as the best of the tradesmen, or I prefer to call them artisans, will have left the country, and only second-rate men will remain in any large numbers to do the work at home.

I know that it is not usual on these occasions for a President to refer to the work in other countries, but I hope that my remarks will not be thought inappropriate in the light of what has been taking place in England during the last few years.

The Possibilities of Steel.

Earlier in the year a very interesting lecture was delivered by Sir William Richmond at the Armstrong College of Science entitled "Universities and Art Teaching," and, as comparatively few were present, I venture to call attention to some remarks of his on the subject of "the possibilities of steel as a material that will answer to æsthetic demands, *i.e.* what is beautiful plus what is useful, and perchance economical."

"In my opinion" (says Sir William), "and I give it for what it is worth, steel is a material which has in it somewhere and somehow great though different possibilities of beauty from those of wood and stone. Perhaps a new beauty, one to which we shall have to get accustomed, but which, and this I believe to be a certainty, will never be attained by imitation of construction or ornament which essentially belongs to other materials."

Sir William's theory is by no means a new one, but now that we find ourselves in an age of steel, it behoves architects to be always keeping their eyes open to its possibilities. At present we are very much afraid of letting it be seen, much more so than some of our Continental neighbours. We erect a steel building and then cover it with stone or some other material; but if a building could be designed in such a manner that we should be satisfied with the appearance of steel construction we should have a style which would be original and belong solely to the twentieth century.

The stone age has had its revival to a surprising extent, especially in some of the leading streets in London, and, though stone is by no means unsuitable for our large towns, it must be confessed that it does not meet with much originality of treatment. In the case of large buildings the classic orders are generally made use of in some form or other over and over again.

Though many leading men have taken up the question as to how steel buildings are to be made beautiful, I know of no really satisfactory solution of this difficult problem. A few years ago, an admirable design for a Gothic cathedral, with steel construction to be covered with lead, by one of our leading architects, was exhibited on the walls of the Royal Academy, and reproductions of it are familiar to most of us; but on looking at it one feels that though the construction is intended to be of steel, it could be carried out more suitably in stone. The wide buttresses with their weatherings and canopies are all suggestive of stone construction. What is wanted is an entirely new type of architecture suitable for visible steel construction, without any attempt at concealment. A great deal could be made of the treatment of very plain steelwork in coloured decoration, provided there was no attempt to give to the metal the appearance of another material.

I do not venture on any suggestions as to the way in which steel buildings could be designed, but feel sure that, had the problem presented itself to some great nation like the ancient Greeks, they would have been equal to the occasion, and have overcome the apparently overwhelming difficulties in some very natural and simple manner. Perhaps the problem will be solved in some country where there are no examples of ancient architecture and where architects will have their minds unbiassed by any early traditions.

Covered Ways.

There is one feature which is absent from all our modern towns, and which, no doubt, as matters now stand, would not come within the Corporation By-laws, but which I think is a decidedly attractive feature. I refer to the covered way. In my young days I was often in the town of Nottingham, and I have a very vivid recollection of the advantages of the covered way in what I believe is still known as the "Long Row." There you were independent of rain or snow, and seeing that rain is an element to be reckoned with in this country, that is a great consideration.

Covered ways could not now be carried out in England on the lines of those in Italian towns, where the exclusion of the sun is the chief requirement, and it is customary to bring the upper part of the buildings in the streets over the flagged footpaths, supported on rows of stone pillars either with or without arches, which give some very effective shadows underneath. These are

very picturesque, but would not lend themselves to the requirements of modern tradesmen ; but I think that covered ways could be designed of steel in a way which would not necessarily be a detriment to the general effect, and the light could be obtained by means of prismatic glass where light was most required. I imagine the roofs to be flat and covered with lead for the most part, or possibly with some cheaper form of covering, but never lean-to roofs glazed after the manner of a greenhouse—*vide* catalogues of metal castings.

It would not be easy to apply them to our street buildings as they now stand without considerable detriment to their appearance ; but, if buildings with visible steel construction became the order of the day, I think that covered ways would follow as being specially adapted to buildings of that nature ; and I am quite sure that those towns which had covered ways would be very popular for shopping centres, owing to the gain in comfort insured thereby ; and on the occasion of any great public function the flat roofs would be very useful as raised platforms from which a good view of processions in the streets could be obtained. Something in the nature of a covered way has lately been effected in Newcastle in front of the premises of a well-known firm of tradesmen in Market Street ; and though it may be said to be of a purely utilitarian character, it has one great advantage, viz. that people can look at the goods displayed in the shop windows for as long as they like, without being in the way of pedestrians.

What I have said as to buildings of steel construction also applies to some extent to ferro-concrete buildings. I should like to see the external surface of ferro-concrete buildings treated decoratively with either mosaic work or tiles, which would give the impression of having been applied, whereas stone or brick give the wrong impression that they are constructional features. The building up of a projecting cornice in ferro-concrete to look like a classic stone cornice cannot be said to have a particle of truth in its favour, and if we give up all attempts to be true in our construction very little can be hoped for the architecture of the twentieth century.

The imitations of the materials themselves are very much to be deplored. Stone and marble are imitated so closely that even a stonemason may be deceived at first sight ; and cheap kinds of wood are scratched and stained to give the impression of oak.

Architecture which depends upon shams both in its materials and construction for its general effect will never seriously impress the minds of any thinking people, and will not be handed down to posterity as "a thing of beauty and a joy for ever."

Addressing the Students of the Association, Mr. Charlewood referred to the changes in the requirements for the Institute Examinations,* and continued :—

I think there is no doubt that the cultivation and training required for the Institute Examinations have had a marked influence upon the standard of architecture in this country during the last twenty years. If you look at some of the illustrations in the building papers of, say, thirty years ago, you wonder how some of the buildings you see depicted there could have been tolerated. And if you look at the buildings in the suburbs of many of our towns to-day, all over England, you will find them much more attractive, and having much greater claim to architecture than the majority of those of an earlier period. No matter where you go, you always find a distinct improvement, showing that they have been, for the most part, designed by those who have been carefully trained, and that training, I assume, has often been acquired in preparing for the examinations ; and the improvement will, I trust, be still more marked as time goes on, owing to the improved training to be got from the new requirements for the examinations.

* See current KALENDAR, and JOURNAL, 21st October 1911.

Leeds and Yorkshire Architectural Society.—At the General Meeting of this Society, held 30th November, the President, Mr. Sydney D. Kitson, M.A. [*F.*], in the Chair, a very interesting paper was read by Mr. Alfred Mattison on "Old Leeds." He described its growth and development from a village up to the city of the nineteenth century, illustrating his text with many slides of old documents and engravings, etc. Mr. W. H. Thorp [*F.*], in proposing a vote of thanks, deplored the loss of many of the historical fabrics so reminiscent of the early days, and remarked upon the Red Hall, Guilford Street, which is at present undergoing drastic changes in the way of renovation and alteration. The motion was supported by Mr. C. B. Howdill [*A.*], who spoke of the lack of civic spirit shown in Leeds, especially with regard to architectural development.

Cardiff, South Wales and Monmouthshire Architects' Society.—The first of the meetings of this Society's winter programme was held on 15th November 1911, when the President, Mr. G. E. Halliday, F.S.A. [*F.*], delivered a lecture on "Old English Pewter," illustrated by between forty and fifty specimens ranging in date from *c.* 1575 to the latter part of the eighteenth century. Mr. Halliday stated that he had been asked to read a paper on "Church Building," and apologised for changing the subject to his "collecting hobby" which he had followed for the last twenty years. He then went on to describe the composition of old English pewter, its history, and the various forms adopted for pewter vessels, from the sixteenth to the eighteenth centuries. Mr. Halliday also exhibited replicas of the five remaining touch plates belonging to the Pewterers' Company and explained the quality and other marks found on so many pieces of old pewter.

MINUTES. III.

At the Third General Meeting (Business) of the Session 1911-12, held Monday, 4th December 1911, at 8 p.m.—Present : Mr. Leonard Stokes, *President*, in the Chair ; 19 Fellows (including 5 members of Council), 13 Associates, and 7 Licentiates—the Minutes of the Meeting held 20th November, having been printed in the JOURNAL, were taken as read and signed as correct.

The following Licentiates, attending for the first time since their election, were formally admitted by the President, viz. : Herbert John Sturges, Hugh William Ellis Ruffle, H. S. Hiley.

The Hon. Secretary having announced the receipt of a number of books presented to the Library, a vote of thanks was passed to the donors by acclamation.

The following candidates were elected by show of hands under By-law 10 :

AS FELLOWS (5).

BARNES : Harry [*A.* 1894] (Newcastle-on-Tyne).
BIRD : Herbert William [*A.* 1897] (Hong Kong).
SPAIN : Joseph [*A.* 1895] (Sunderland).
WELLS : Robert Douglas [*A.* 1901].
WHITE : Horace [*A.* 1903].

AS ASSOCIATES (56).

ADAMS : Maurice Spencer Rowe [*S.* 1909].
ANGUS : Laurence Mortimer [*S.* 1910].

BARKS : Edward Ernest [*Special Examination*].
BAXTER : Paget Logan [*Special Examination*].
BENIANS : Hubert Joseph [*S.* 1908].
BENSLYN : William Thomas [*S.* 1905] (Birmingham).
BEVIS : Richard Henry Percy [*S.* 1906] (Southsea).
BLACKFORD : Arthur George [*S.* 1907].
BROAD : Kenneth Stephen [*S.* 1909].
BROWN : Baldwin [*S.* 1903] (Bradford).
BROWN : Murray [*S.* 1910].
BULLOCK : John Edgar [*S.* 1907].
CLARKE : Leonard Harris [*S.* 1910] (Harrogate).
DAVIES : Joseph Charles Gladstone [*S.* 1909] (Glamorgan).
DAVIES : William Frederick [*S.* 1907] (Liverpool).
DAVIS : Charles [*Special Examination*].
EDESON : Charles Alva [*Special Examination*] (Derby).
EVANS : Arthur Frederic [*S.* 1908] (Liverpool).
FINNING : Leonard John [*S.* 1907] (Exeter).
GARBUTT : Wilfred Thomas [*S.* 1909] (Bradford).
GOODWIN : Bernard Malcolm [*S.* 1906].
GORRINGE : Wilfred Stuart [*S.* 1907] (Seaford).
HAKE : Guy Donne Gordon [*S.* 1909].
HARDING : Charles Alfred [*S.* 1911] (Glasgow).
HOME : Geoffrey Wyville [*S.* 1909].
HOWITT : Thomas Cecil [*S.* 1908] (Nottingham).
KEASELEY : John Norman [*S.* 1904].
KNIGHT : Frank Wardel [*S.* 1909].
LAWSON : Wilfrid [*S.* 1909] (Newcastle-on-Tyne).
LEROY : Adrien Denis [*S.* 1909].
LOGAN : Philip Norman [*S.* 1908] (Bristol).
LONG : Charles William [*S.* 1908].
MARTIN : Moritz Richard [*S.* 1905].
MENNIE : Frederick Edward [*S.* 1907].
MERRIMAN : Harold Ian [*Special Examination*].
MOTTRAM : Alfred Hugh [*S.* 1910].
OWEN : George Burgoyne [*S.* 1909] (Sydney, New South Wales).
PARKER : Thomas Abel [*S.* 1908] (Bury, Lancs).
PATERSON : John Wilson [*S.* 1909] (Edinburgh).
PRITCHARD : Ivor Mervyn [*S.* 1909].
SAMSON : Hayward Lewis [*S.* 1904].
SWANNELL : Charles Malcolm [*S.* 1908].
SWINDELLS : Francis Harold [*S.* 1909].
TAPPER : Michael John [*S.* 1908].
THORNTON : Harold [*S.* 1905] (Dewsbury).
TICKLE : Arthur George Warnham [*S.* 1906].
WEST : Harry [*S.* 1906].
WESTBYE : Johannes Thorwaldson [*Special Examination*] (Christiania, Norway).
WHITEHOUSE : Arthur Eli Mitchell [*S.* 1907] (Manchester).
WIGZELL : Norman [*S.* 1908] (Sunderland).
WILLIAMS : Llewellyn Ebenezer [*S.* 1909].
WILSON : Allen Woodward [*S.* 1903] (Peterborough).
WINTER : Cecil Reynolds [*S.* 1907] (Bournemouth).
WORMALD : Harry [*S.* 1904] (Wakefield).
WRIGHT : Christopher [*S.* 1907].
YOUNG : Allan Murray Campbell [*S.* 1905].

As Hon. Associates (2).

CRANE : Walter, R.W.S., Commendatore Royal Crown of Italy.
MARSHALL : John Hubert, M.A.Cantab., Companion of the Indian Empire; Director-General of Archæology in India (Simla, India).

The Secretary announced that by a resolution of the Council under By-law 22 the following gentlemen had ceased to be members of the Royal Institute—viz. Harold Edmund Church, John Edmund Evans, Alfred Frampton, Herbert Goodman, William Brame Goodwin, Charles Valentine Hunter, Harry Tom Boden Spencer, Francis Carr Wrigley.

The President invited the Meeting to inspect the collection of photographs forming part of the Arthur Cates Collection presented to the Institute by Mrs. Cates, and proposed that their renewed thanks be sent to Mrs. Cates for her valuable gift; also that the cordial thanks of the Institute be expressed to the Librarian, Mr. Rudolf Dircks, through whom the donation had been received.

The President left the Chair at 8.15, and the Meeting dispersed to view the photographs which were displayed on tables in the East Gallery.

Election of Licentiates.

At the Council Meeting of the 4th December, the following candidates, having been found eligible and qualified under the Charter and By-laws, were elected Licentiates of the Institute in accordance with By-law 12, viz. :—

AINLEY : Cyril Eyres (Manchester).
ARABIAN : John.
ARCHIBALD : Richard James (Middlesbrough).
BELL : Charles William (Sunderland).
BRIDGES : Walter Herbert (Skegness).
COOPER : Bertie.
COYLE : Alfred Herbert (Baroda, India).
DAVIES : George Henry (Pontypridd).
DEW : William Allan (Hyde, Cheshire).
DIACK : Alexander Ellis (Aberdeen).
DYER : Cyril Hamilton (Bloemfontein).
GRAZEBROOK : Tom (Stourbridge).
GREENHOW : Charles Ingleby (Newcastle).
GRIEG : Charles Henry (Edinburgh).
HALL : Watson (Oudtshoorn, South Africa).
HILTON : Ernest William (Altrincham).
HOLDSWORTH : Ledgar (Wakefield).
LANE : George William Curzon (York).
LAWSON : Vincent Alexander (Stroud).
LEGG : Frederick George Ivall.
LEWIS : John Martin (Madras, India).
LOWSON : James (Aberdeen).
MACDONALD : Donald (Dingwall).
MALVERN : Thomas (Cheltenham).
MARGETTS : William Thomas.
MILLER : Robert Thomas.
PALMER : Bernard Cuddon (Lewes).
PAWLEY : Ernest.
REID : Peter (Kirkcaldy).
SCOTT : William H. (Cardiff).
SELWYN : Stanley (Eastbourne).
SHIPWRIGHT : William George.
SISLEY : Henry Arthur (Manchester).
SMITH : Charles Bouton.
SPARK : Charles H. (Sydney, N.S.W.).
STABLER : Arthur William (Durham).
STANFORD : Joseph Hunt (Toronto).
STEER : Walter (Brighton).
TAYLOR : Samuel (Burnley).
TOWNLEY : Herbert (Manchester).
VINER : George James Morriss.
WHITE : Joseph Dixon (Bootham, York).
WOOD : Absalom Reade (Burslem, Staffs).

Erratum.—An error in the names of candidates who passed the recent Statutory Examination requires rectification on p. 61. The names should read :—

Ronald Seymour Andrews, of 103 Bow Road, Bow, E.
Joseph Edward Mundell [*A.*], F.S.I., 157 Wool Exchange, Coleman Street, E.C.
Herbert Henry Young, 11 Tankerville Road, Streatham, S.W.

r Architectural Library

Fig. 62.—Central Gardens, the Lindenburg Hospital, Cologne.

MODERN GERMAN HOSPITAL CONSTRUCTION.—III.

By William Milburn, Junr., B.Sc. [*A.*], Henry Saxon Snell Prizeman 1908, Godwin Bursar 1910.

(*Continued from p.* 108.)

ELECTRICAL AND LIGHT DEPARTMENTS.

THE important parts which the Röntgen Rays, the Finsen Light, and electricity play in the modern treatment of skin and other diseases render the very complete departments found in the German hospitals of great interest. At St. Georg Hamburg and Cologne Lindenburg the light department is placed on the first floor of the operation house. At Hamburg Eppendorf it is a detached block connected to the clinical lecture theatre, at Nuremberg it is connected to the bath house, at the Virchow Berlin it is a detached block in the centre of the hospital, at Düsseldorf it is situated between the pavilions for male and female skin and venereal diseases, and at the Royal Charité, Berlin, it is situated on the upper floors of the out-patients' department for skin and venereal diseases. The accommodation of these institutions usually comprises separate waiting-rooms for men and women, Röntgen rooms for treatment, examination, and photography, Finsen Light treatment rooms, dark-rooms, and laboratories, and the equipment is always very fine and complete.

BATH-HOUSES.

The bathing department is looked upon in Germany as of the greatest importance, and the bath-houses or blocks in which the baths are contained are perhaps without parallel in the English hospitals. Generally speaking, they are situated in the centre of the medical department, between the men's and women's sides, and bear the same relation to that

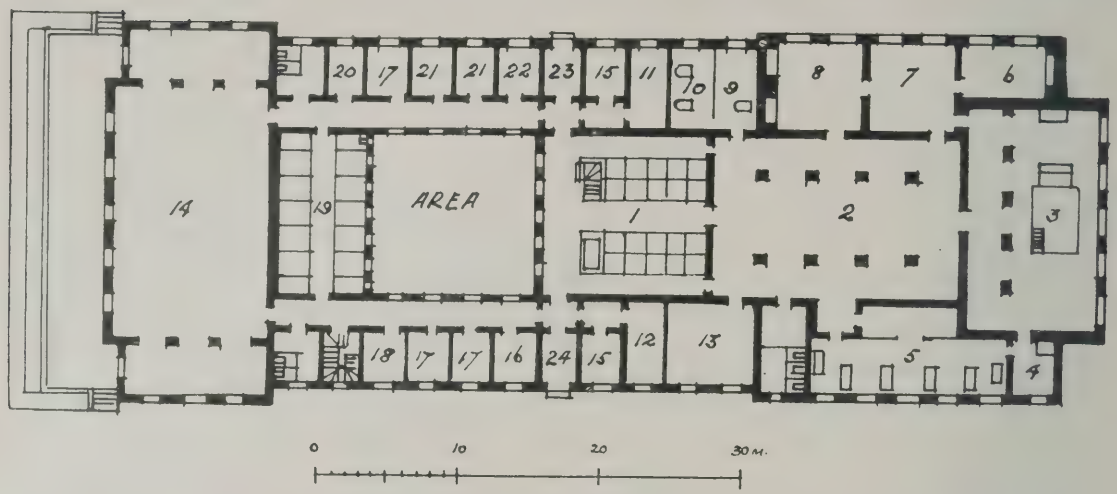


FIG. 42.—GROUND FLOOR PLAN OF THE BATH-HOUSE, THE VIRCHOW HOSPITAL, BERLIN.

1. Undressing Room. 2, Cooling Room. 3, Hydropathic Room. 4, Steam Cabinet Bath. 5, Sand Baths. 6, 7, Turkish Baths. 8, Steam Bath. 9, Electrical Baths. 10, Mineral Water Baths. 11, Electrical Treatment. 12, 13, Inhalatoria. 14, Medical Gymnasium. 15, Bath Linen. 16, Apparatus. 17, Staff. 18, Examination. 19, Staff Baths. 20, Medical Officer. 21, Head Sister. 22, Dining Room. 23, Men's Entrance. 24, Women's Entrance.

FIG. 43.—CENTRAL COOLING ROOM, THE VIRCHOW HOSPITAL, BERLIN.

department as does the operation house to the surgical department. The baths are not in duplicate for the sexes, but men and women attend at different times. At the Eppendorf and St. Georg Hospitals Hamburg, Nuremberg, Dresden, and the Virchow Berlin, the traffic to and from the bath-house takes place in the open; at Charlottenburg, Cologne Lindenburg, and Munich III., through closed corridors, and at Düsseldorf through a subway.

The finest bath-house in Germany, with the exception, perhaps, of that at Beelitz-i.-Mark, is found at the Virchow Hospital, Berlin [fig. 42], and is a detached block situated in the centre of the medical department, it being as remarkable for its architectural treatment as for its complete equipment. The entrances for men and women are on opposite sides, adjoining the linen rooms, where they receive the bathing linen, and then pass into the undressing room which contains twenty undressing boxes. In this room is a stair and a bed-lift to the sun-bath on the flat roof. The central cooling and massage-room

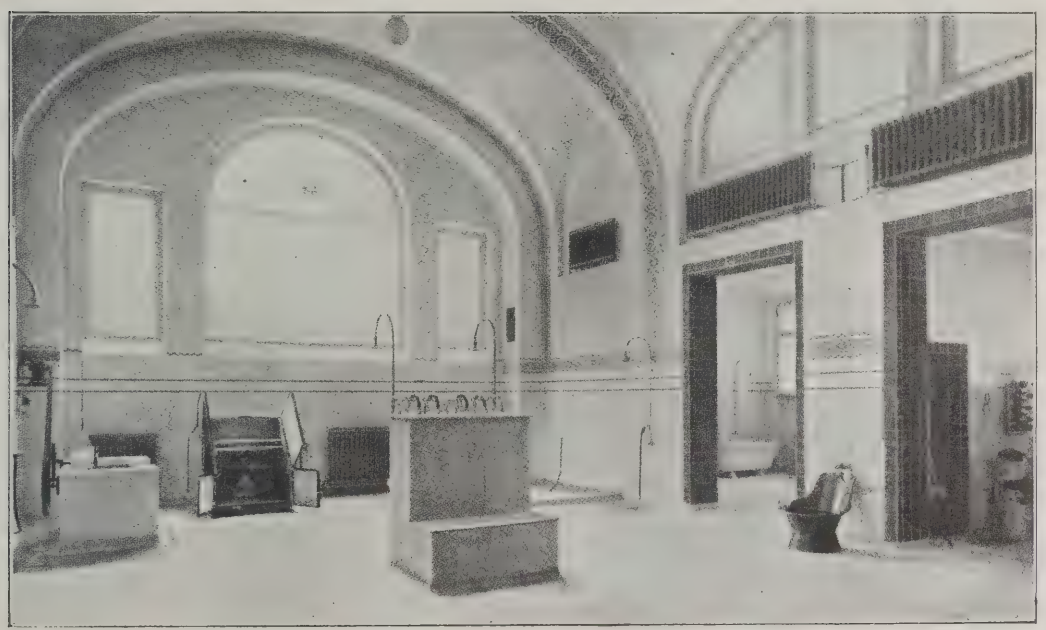


Fig. 44.—The Bath-house, Düsseldorf General Hospital.

[fig. 43] is entered directly from the undressing room, and is designed on the lines of a basilica, with central vaulted and clerestory-lighted nave and side aisles. Opening from this room are the various bath-rooms for hydropathic treatment, sand baths, carbonic acid gas baths, Turkish and Russian baths, etc. On the side wings are rooms for electrical treatment and inhalation, doctors', nurses', and attendants' rooms, while at the opposite side of the area are staff baths, and facing on to the central avenue the large medical gymnasium, with a terrace to the front for exercises in the open.

As a rule the cooling-rooms are the centre of the bath-house, the various bath-rooms opening from them, as at Düsseldorf [fig. 44] or Charlottenburg. The hydropathic rooms are usually equipped with a variety of sprays, douches, jets, and waves, which are controlled by the attendant from a special platform, various spray and sitz-baths, and usually a cold-water plunge-bath. The carbonic acid gas baths [fig. 45] are mineral-water baths produced by mixing the water and carbonic acid gas under pressure in a cylinder; the hydro-electric baths are either complete, in which the current passes through a plunge-bath, or partial, in

Fig. 45.—Mineral Water Baths, Hamburg St. Georg.

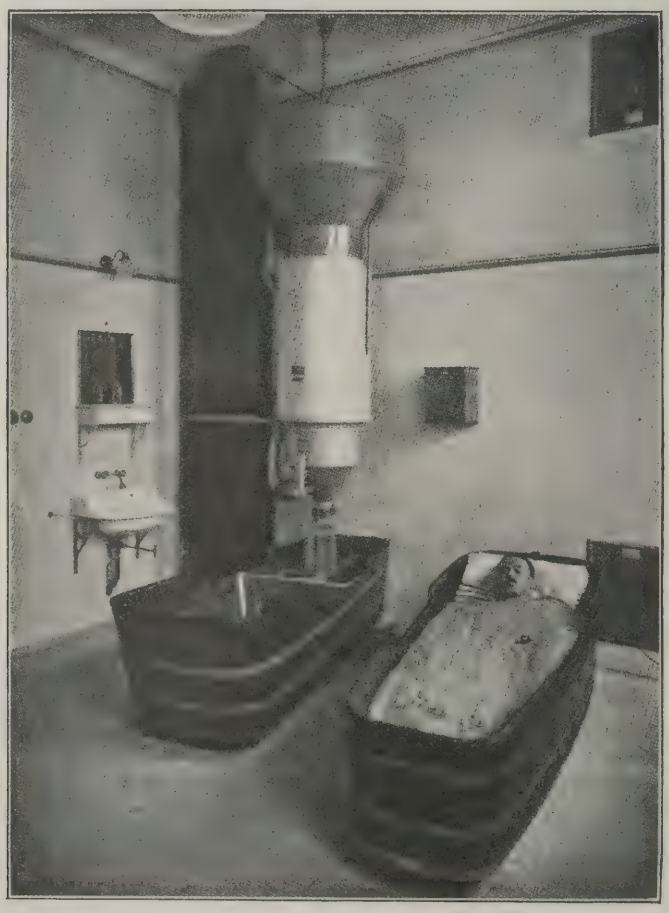


Fig. 46.—Sand Baths, Hamburg St. Georg.

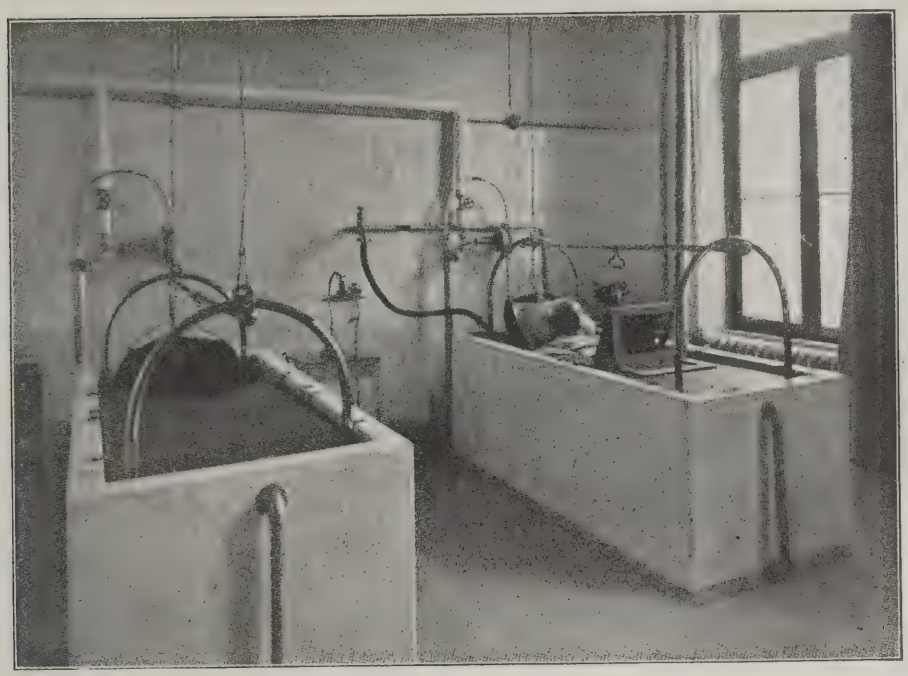


FIG. 47.—PERMANENT BATHS, HAMBURG ST. GEORG.

FIG. 48.—MEDICAL GYMNASIUM, THE VIRCHOW HOSPITAL, BERLIN.

which only one or more of the limbs are treated in a small bath. The sand baths [fig. 46] are employed for the application of dry heat, the apparatus comprising a cylinder for heating the sand, wood baths on wheels so as to convey the patient into the open, plunge-baths for use after the bath, and sand stores with apparatus for washing and disinfecting the sand. The Turkish baths comprise the various hot rooms, and are usually *en suite* with the Russian or steam baths. Among the other baths are electric light baths, peat baths, and cabinet baths for steam and hot air. The inhalatoria for chest complaints contain apparatus either for single or for common use.

The water-beds [fig. 47] for permanent baths are of particular interest, every hospital possessing at least one, and they are of great value for such cases as burns and typhoid. They consist of large built baths, in which the patient, who can be wholly immersed, lies on a sail-cloth bearer on a metal frame, which can be lowered or raised, while the flow of water

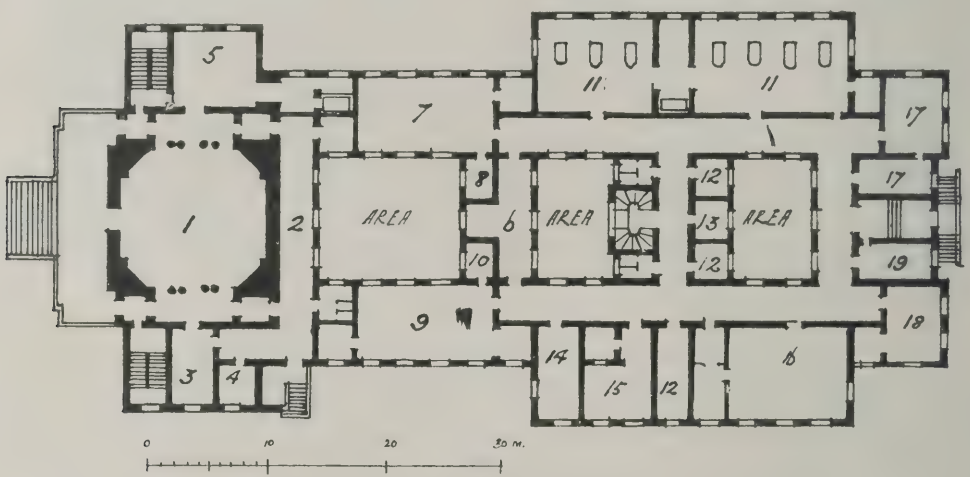


Fig. 49.—Ground Floor Plan of the Pathologic-Anatomical Institute, the Virchow Hospital, Berlin.

1, Mortuary Chapel. 2, Friends' Waiting Room. 3, Priest. 4, Attendant. 5, Viewing Room. 6, Preparation Room. 7, Histology. 8, Scullery. 9, Bacteriology. 10, Incubators. 11, Dissecting Room. 12, Balance Room. 13, Office. 14, Incubator Room. 15, Photographic Room. 16, Chemical Laboratory. 17, Prosector. 18, Medical Officer's Duty Room. 19, Attendant.

at a constant temperature is automatically regulated. At the Virchow Hospital there is one of these baths in every alternate large ward, in some of the other hospitals, as Munich III., they are contained in single wards, while at Hamburg Eppendorf and St. Georg permanent bath departments with wards for three, two, and one bed are found in the bath-house.

The medical gymnasia [fig. 48] are always most complete, and are employed for what are termed medical or curative gymnastics. They contain a large amount of apparatus, a portion being worked by electric motors, for producing active and passive movements, mechanical massage, and vibration. As a rule, attached to the medical gymnasia, are other rooms for drill or Swedish exercises, the treatment of lateral curvature of the spine, and work-rooms for such work as wood-chopping or sand-shovelling. Fine examples of medical gymnasia are found at the Virchow Berlin, Eppendorf, Beelitz-i.-Mark, and Düsseldorf.

PATHOLOGICAL, ANATOMICAL, AND MORTUARY BLOCKS, AND MEDICAL SCHOOLS.

The very great attention paid in Germany to medical education and the investigation of diseases renders the pathological, anatomical, and mortuary blocks of great importance, every

hospital possessing a large block for these purposes, which comprises, in addition to the mortuary and adjoining rooms, dissecting rooms and laboratories for research work, a museum, and, in some cases, class-rooms. Attached to these blocks as a rule are the mortuary chapels and rooms for mourners, in which the funeral services are conducted, and whenever possible this series of rooms has separate access, and is kept distinct from the scientific portion of the building.

One of the finest examples is found at the Virchow Hospital, Berlin [fig. 49], consisting of a large detached block, situated at the head of the central avenue, and with direct access to the adjoining street through an avenue planted with weeping willows. The mortuaries and adjoining rooms are situated in the basement, and the scientific rooms on the ground floor, with the chapel and mourners' rooms to the rear. .The mortuary slabs here are of terrazzo, the dissecting tables are of Solenhofer limestone, the floors and dados throughout are tiled, and the fittings to the laboratories are of glass and iron construction. The mortuary chapel [fig. 50], like the majority of these apartments, is particularly fine in its internal treatment. A detached block some little distance from the institute contains the animals for experimental purposes; stalls for the larger animals, cages for the smaller, and a loft for birds, being provided. A special autopsy block is attached to the infectious diseases department for the investigation of infectious diseases, and contains special rooms for work with cholera, plague, and other of the rarer infectious diseases.

FIG. 50.—MORTUARY CHAPEL, THE VIRCHOW HOSPITAL, BERLIN.

Other fine examples of these blocks are found at Hamburg Eppendorf and St. Georg, Nuremberg, Dresden, Schöneberg, and Charlottenburg West End.

At the Frankfort City Hospital there is a very fine Anatomical Institute, founded by the Senckenberg bequests, with lecture theatres and adjoining rooms, and in the two Academies

of Medicine at Düsseldorf and Cologne respectively one finds very complete pathological institutes fully equipped with laboratories and lecture theatres, for post-graduate courses and research work. A portion of the block at Düsseldorf forms the finely equipped Institute of Experimental Therapy, while at Cologne Lindenburg a point of interest is that the mortuary chapel and mourners' rooms are in an entirely separate block well away from the pathological institute, communication between the two being by a subway, as is the mortuary traffic throughout the hospital. At Dresden Johannstadt, too, the mortuary traffic takes place in subways, the bed-lifts descending to the basement for this purpose.

In the Royal Charité Hospital attached to the University of Berlin the pathological institute is said to be the finest in the world, the autopsies per year numbering over two thousand. It consists of three large blocks connected together by closed corridors. The main block is

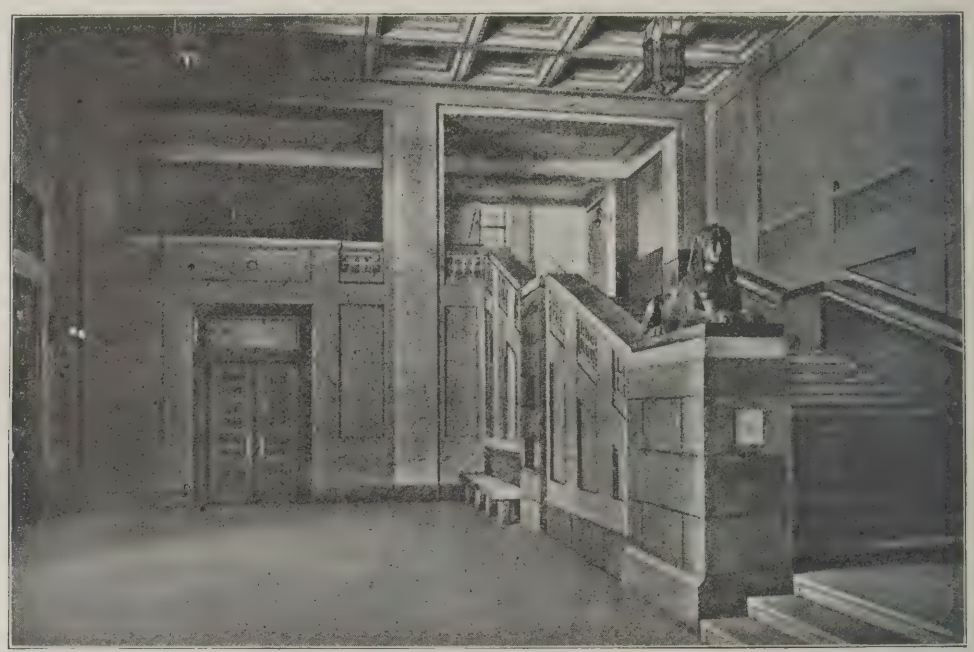


Fig. 51.—Entrance Hall, the Royal Anatomical Institute, Munich.

of three stories, and contains the scientific rooms, laboratories, and research rooms; the autopsy block is again of three stories, and contains the mortuaries, etc., in the basement, with the chapel and mourners' rooms adjoining, and the dissecting rooms and clinical lecture theatres on the upper floors; while the third block of five stories is the museum, and contains the unique collection of specimens accumulated by the celebrated pathologist, Rudolf Virchow. A detached animal stable for the experimental animals completes the institute.

The new Anatomical Institute at Munich [fig. 51] which forms part of the University is a detached block situated in the clinical quarter of the city, and is largely of reinforced concrete construction. On the ground floor is the fine entrance hall with staircase, the public museum of anatomical specimens etc., on the first floor the large dissecting hall, semi-circular in shape, in which five hundred students can work at the same time, the large lecture theatre with accommodation for about three hundred, and adjoining rooms, and on the upper floors the microscopical and research rooms, and laboratories.

RESIDENTIAL BLOCKS.

The directors as a rule have special houses provided for them in the hospitals, as at the Virchow Berlin, Nuremberg, and Munich III., while the resident officials either have special houses or else apartments in the administrative block.

Some of the doctors usually reside in their pavilion, generally on an upper floor, while the remainder have their apartments in the administrative block, or in a doctors' home as at the Virchow.

The quarters for nurses differ in the various hospitals. As a rule a proportion of the nurses sleep in their pavilion, in the older type, as Hamburg Eppendorf and Nuremberg, on the same floor as the patients, and in the more recent, as the Virchow or Charlottenburg West End, on an upper floor. The nurses' home itself is often contained on the upper floors of the housekeeping block, as at Nuremberg, Dresden, or Düsseldorf, but detached homes are as often found, as at the Virchow, Cologne, Charlottenburg, or Munich III.

The domestic staff have their apartments as a rule close to their work, the kitchen staff in the kitchen block, laundry maids in the laundry block, ward maids in the pavilions, and female staff generally on the upper floors of the nurses' home or administrative blocks.

The technical staff, as engineers and electricians, reside close to their work, and lodges are provided for the porters.

DOMESTIC BLOCKS.

The domestic or economic blocks comprise the kitchens, laundries, and stores, and are kept entirely separate and detached from the administrative offices and the patients' quarters, yet at the same time as central as possible for service. They are usually grouped with the technical blocks with separate access for tradesmen, good examples of this grouping being found at Hamburg Eppendorf and the Virchow Hospital, Berlin.

As a rule the food service from the kitchens to the pavilions takes place through the open in special dinner-wagons. At Dresden in wet weather the service is performed in the subways, while at Munich III., perhaps the most modern hospital, the kitchen block is connected up to the pavilions by closed corridors. The food wagons generally serve directly to the doors of the pavilions, and thence to the ward kitchens, but at Schöneberg the food is passed through a special opening below the sill of the ward kitchen window, and at Düsseldorf and Cologne the food is brought to an outside lift by which it is raised to the ward kitchens. In infectious diseases pavilions the service generally takes place through a special window.

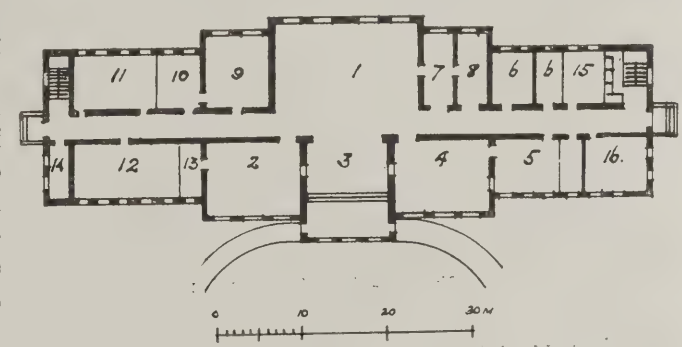


FIG. 52.—GROUND FLOOR PLAN OF THE KITCHEN BLOCK, THE VIRCHOW HOSPITAL, BERLIN.

1, Central Kitchen. 2, Roasting Kitchen. 3, Servery. 4, Scullery. 5, Crockery. 6, Pantry. 7, Housekeeper. 8, Milk Room. 9, Meat Preparing. 10, Meat Store. 11, Groceries. 12, Vegetable Scullery. 13, Roasting Utensils. 14, Steward. 15, Office. 16, Staff Dining Room.

A common arrangement is to place the kitchen and laundry in one block as at Nuremberg, Düsseldorf, or Dresden Maternity, known as the "Wirtschafts-Gebäude" (housekeeping block), the kitchen being in one wing and the laundry in the other, while the nurses' and servants' homes and hospital stores are on the upper floors. In other hospitals, as at Charlottenburg West End, Munich III., Schöneberg, or the Virchow Berlin, the kitchens and laundries are in separate blocks.

The Virchow Hospital kitchen block [fig. 52] is perhaps a typical example of the

German hospital kitchen. The main kitchen [fig. 53], placed in the centre of the ground floor, is 58 feet long by 44 feet wide, and rises through the two stories. All boiling is done by steam and roasting by gas, the equipment comprising 24 boiling-pans of various sizes with a total capacity of 2178 gallons, boiling and roasting hearths, etc. To the front of the kitchen is the servery to the food-wagon porch, and on either side the roasting and boiling kitchen, with 26 gas ovens, potato-steamers and grids, and the scullery, each of which is 36 feet long by 29 feet 6 in. wide and has rooms adjoining for roasting utensils and crockery respectively.

Fig. 53.—The Central Kitchen, the Virchow Hospital, Berlin.

The other rooms on the ground floor comprise the housekeepers' room, milk room and pantries, meat preparing room and pantries, large provision store, stewards' room, office, and staff dining-room.

In the basement are store rooms with refrigerating apparatus for vegetables, potatoes, meat, beer and wine, mineral water manufactory, and dining and bath-rooms for the male staff. On the first floor are the apartments for the head-cook, cook, and 36 kitchen-maids, and on the roof floor the apartments for 17 male kitchen staff. A detached block to one side contains the wagons for the food service. The floors generally are tiled and the dados glazed tiled, while special provision is made for exhausting steam.

The laundry block [fig. 54] at the Virchow Hospital is of similar form to the kitchen block and is a typical example of the German hospital laundry. The sterilised linen from the pavilions is brought to the covered porch at the eastern end of the block, and then taken into the receiving room, where it is sorted into the bins, which are constructed of reinforced concrete covered with white glazed tiles. Adjoining is the steeping room, containing 27 steeping troughs of similar construction to the sorting bins, three steam boiling-pans for the removal of any blood or pus spots from the linen, and boilers for the soap and soda solution, which is led from here to the washing machines.

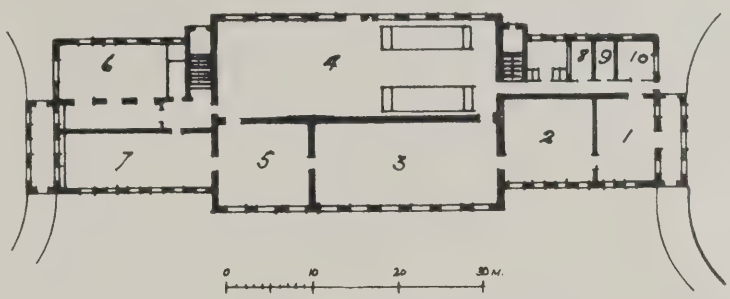


Fig. 54.—Ground Floor Plan of the Laundry Block, the Virchow Hospital, Berlin.

1, Receiving Room. 2, Steeping Room. 3, Wash House. 4, Drying Room. 5, Mangling Room. 6, Ironing. 7, Delivery Room. 8, Engineer. 9, Soap Store. 10, Office.

The linen then enters the wash-house, 70 feet 6 in. long by 31 feet wide and extending through the two stories. The machinery, which does not differ greatly from that employed in England, is all electrically driven, and comprises ten washing machines, each capable of

Fig. 55.—The Wash House, Düsseldorf General Hospital.

washing eleven stones of dry linen in 45 minutes, and six hydro-extractors making 800 revolutions per minute [see fig. 55].

The smooth bed and table linen passes next to the mangling room, where it is dried and ironed at the same time by two steam mangles.

The coloured, wool, and body linen comes into the drying room, to the "chain" drying apparatus, which is very largely employed in Germany, drying houses or drying compartments being uncommon. It consists of a closed wooden compartment some 30 feet long and 10 feet wide, which is steam heated, the hot air passing out through an extract duct at the top. The linen is hung at the entrance end of the apparatus on horizontal rods, which travel on a continuous chain in about an hour to the opposite end of the compartment, where the linen falls into a box, while the rods return on the lower segment of the moving chain to the entrance end. The linen is then mangled by three electrically driven machines, and folded on the special tables, whence it is taken to the ironing room which contains fifteen working places, or to the delivery room, which adjoins the porch to which the linen-wagons come to convey the clean linen to the pavilions.

The remaining ground floor rooms comprise an office, soap store, engineers' room, and a large dressing-room and lavatory for the laundry staff. On the first floor is a large needle room with twelve sewing machines, a reserve ironing-room, a dining-room with scullery for the laundry maids, large linen stores, and apartments for the head-laundress and nine laundry maids, whilst on the roof floor accommodation is provided for 24 more maids. A large turf stretch to the north of the block is used as a bleaching ground for the linen, and a small block to the east contains the linen-wagons.

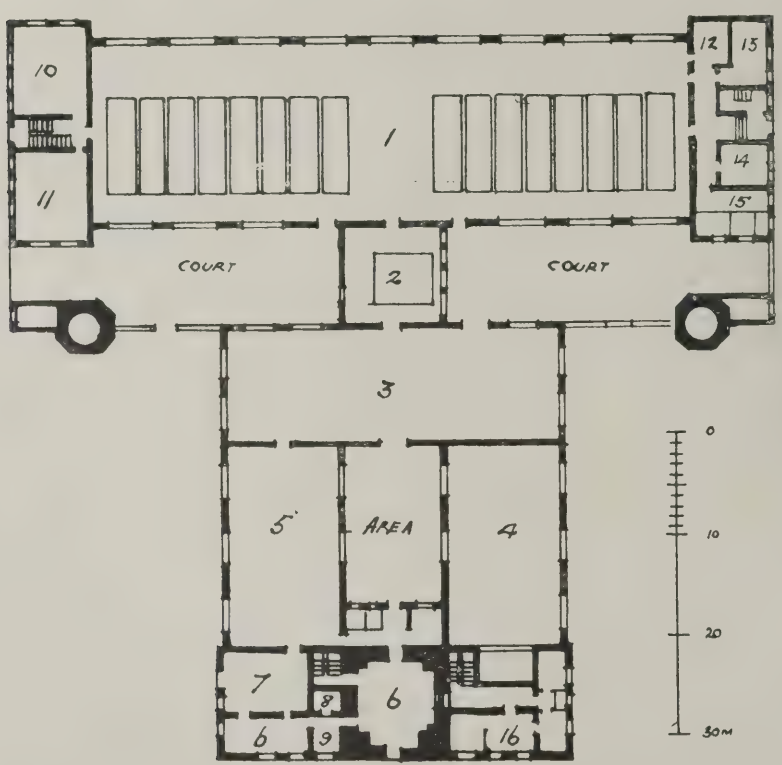


Fig. 56.—Ground Floor Plan of the Boiler and Engine House Block, the Virchow Hospital, Berlin.

1, Boiler House. 2, Pump Room. 3, Engine Room. 4, Accumulators. 5, Water Supply. 6, Water Tower. 7, Ice Machine. 8, Ice Store. 9, Ice Delivery. 10, Engineer's Workshop. 11, Smith and Plumber. 12, 13, Engineers. 14, Staff Dining Room. 15, Bath and Lavatory. 16, Electrical Engineer's Apartments.

Special blocks are in some cases erected for the hospital and general stores, as the "economy" block at Hamburg Eppendorf, while at others they are contained on the upper floors of the kitchen and laundry blocks. Detached ice houses for ice storage are found at Hamburg Eppendorf and Dresden.

TECHNICAL BLOCKS.

The technical blocks, comprising the boiler- and engine-houses for the provision of the heating, water supply, lighting, and power for the hospital, the workshops, and the disinfection blocks, are usually grouped together in a convenient and central position, with separate access from outside.

The boiler- and engine-house block [fig. 56] at the Virchow Hospital, Berlin, may be taken as a typical example. The boiler-house [fig. 57] is 197 feet long by 59 feet wide, and contains

16 boilers of the Lancashire type with superheaters, eleven of which with a pressure of eight atmospheres are for the heating and hot-water supply of the whole hospital, the cooking, disinfecting, and sterilising apparatus, and five with a pressure of eleven atmospheres are for the electric lighting supply, the pumps for the water supply, and the ice machine.

The pump-room contains the steam distribution valves, the pumps, and the condense water-tanks under. The engine-house is 110 feet long by 36 feet wide and contains three dynamos for the electric lighting supply and power. The water supply room contains the apparatus for the cold and hot water supply of the whole hospital. The adjoining rooms contain the ice machine, which is capable of providing 43 cwts. of ice in 24 hours by the

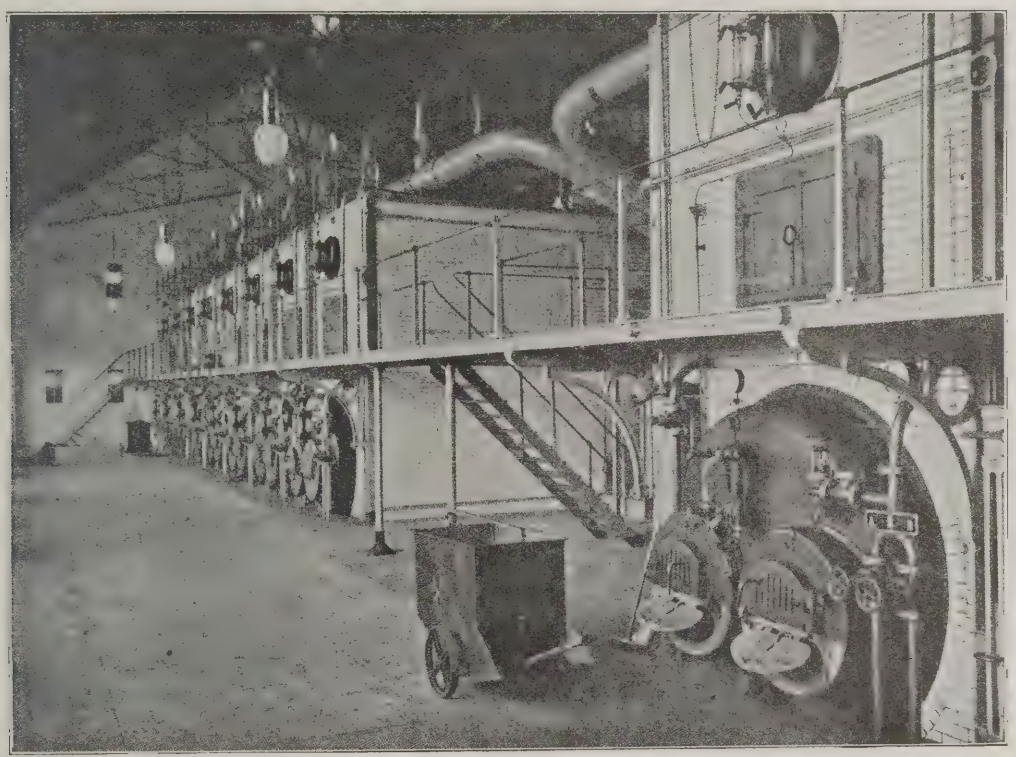


Fig. 57.—The Boiler House, the Virchow Hospital, Berlin.

sulphuric-acid compression process. The remaining rooms comprise staff apartments and offices, engineers' and electricians' workshops, etc.

The workshops block at the Virchow is situated close to the boiler-house, and contains large workshops for the upholsterer, joiner, painter, and glazier, and offices, and on the upper floors large hospital stores.

The disinfection blocks are always very large and complete, owing to the fact that the hospitals usually contain an infectious diseases department, and also that the blocks are often used for the disinfection of the bedding and articles brought from houses in the cities where infectious disease has occurred.

The block at Charlottenburg West End [fig. 58] is a good example of the type. The apparatus employed does not differ greatly from that in use in England. Superheated steam is employed for disinfecting clothing, bedding, and mattresses, boiling for smaller articles, and formalin chambers for leather, fur, and felt articles. The disinfectors [fig. 59] are built

into a wall forming infected and disinfected sides, access from one side to the other being only through a bath-room with dressing- and undressing-rooms adjoining. The patients' clothes are stored in bags hung on special hooks in a large clothes store in the roof. Two destructors are provided for bandages, refuse, etc., and a disinfecting and cleansing apparatus for the vessels in which the infected bandages are brought from the infectious diseases department. A small discharge department for patients on discharge from the infectious diseases department is also provided, comprising undressing, bath, and dressing rooms.

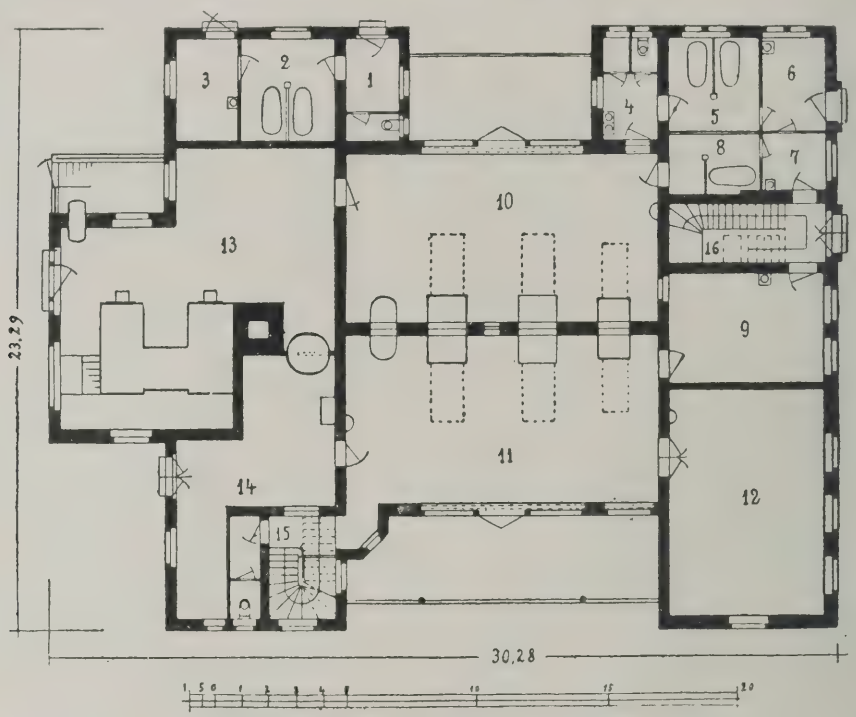


Fig. 58.—Ground Floor Plan of the Disinfection Block, Charlottenburg West End Hospital.

1, 2, 3, Undressing, Bath, and Dressing Rooms for patients on discharge from the Infectious Diseases Department. 4, 5, 6, Disinfection Attendants' Undressing, Bath, and Dressing Rooms. 7, 8, Officials' Undressing, Bath, and Dressing Rooms. 9, Disinfection Overseer. 10, Infected Side. 11, Disinfected Side. 12, Mattresses etc. Store. 13, Destructor Department. 14, Delivery Room for Bandage Receptacles. 15, Staircase to Patients' Clothes Store. 16, Staircase to Disinfection Attendants' Apartments.

In those hospitals, such as Dresden Johannstadt, which are the centres for the municipal ambulance service, complete stables and coach-houses with drivers' apartments are provided.

GROUNDS.

The German hospitals are always remarkable for the lay-out of their grounds, the Virchow Hospital, Berlin, being a fine example. Here a large portion of the site is laid out as a park [fig. 60] for convalescents, and provided with garden pavilions and summer-houses, while the fine central avenue [fig. 61] with its four rows of large trees and gardens, and the architectural courtyard, have already been described. Other fine examples are Cologne Lindenburg [fig. 62], and Charlottenburg West End, where the central spaces between the medical and surgical departments are very well laid out. In the majority of the hospitals large green-houses are provided, and also in many cases vegetable gardens.

HEATING.

The heating system adopted in the German hospitals is almost invariably derived from a central source—the boiler-house—the steam being conveyed from the boilers in the main through subways to the separate blocks, usually at a pressure of about eight atmospheres. At Hamburg Eppendorf a separate heating installation was originally provided to each pavilion, but the disadvantage of the constant coal traffic through the grounds, and the smoke production from the various chimneys, led in recent years to the grouping of three or more pavilions together for heating purposes, while in the pavilions of the new infectious diseases department recently erected the heating is derived from a new central boiler-house.

FIG. 59.—DISINFECTING APPARATUS, THE VIRCHOW HOSPITAL, BERLIN.

The heating medium generally employed is radiation, the usual methods being either by low pressure hot water or atmospheric pressure steam. If the former, each block is usually treated separately from heating calorifiers placed in the basement. The radiators are almost invariably open, and are of the vertical loop type, bracketed clear of the walls; or a form much employed is some half-dozen horizontal pipes about two inches in diameter, placed one above the other, and running round the window walls to sill height. If the heating is by steam it is reduced on entry into each block to the required pressure, usually about 1/10 atmosphere, though it varies in the different hospitals. The radiators for steam heating are of the vertical loop type.

Speaking generally, administrative, domestic, and technical blocks are heated by steam, pavilions and blocks for patients by hot water, but this rule is subject to much variation. Operation houses, where a high temperature may be required at short notice, or bath and similar rooms, which may occasionally require to be heated in summer, are as a rule heated

by steam. The special methods adopted for the heating of operating theatres have already been described.

At the Johannstadt Hospital, Dresden, the heating is by hot air, the heating and ventilation being combined.

At the Eppendorf Hospital, Hamburg, the original method of heating the wards was by warming the terrazzo floors by steam pipes suspended in channels beneath the floors, after the manner of the Roman thermæ. It was claimed for this method of heating that while the feet were kept warm the head was kept cool, the heat was diffused equally, and a thorough circulation of the air was ensured, but in practice it has been found that the floors are most liable to crack, they in many cases having to be relaid every five years, while the nursing staff by continually working on the heated floors are rendered liable to various ailments. In the new infectious diseases department at this hospital the heating is by steam radiators.

In many cases, however, steam pipes are suspended beneath a ground floor with the intention of warming the floor to a similar extent as the first floor is warmed by the heated rooms under, and so to take the chill from the tiles or terrazzo floor.

All windows are usually double-glazed so as to prevent loss of heat by radiation.

The usual temperature specified for the wards and patients' rooms is about 68° Fahr., for staff and sanitary rooms about 64° Fahr., for operating theatres about 86° Fahr., and for rooms in the administrative and domestic blocks about 68° Fahr.

Open fires as a heating medium are practically unknown, the one source of smoke in the hospital being the boiler-house stack, where the smoke production can be scientifically controlled.

VENTILATION.

The prevailing opinion in the German hospitals appears to be that natural ventilation is preferable to artificial methods. Some form of ventilating apparatus is, however, almost invariably installed for use in winter, as during the cold weather it is often impossible to open the windows of the wards, and on rare occasions in summer ventilating apparatus may be required.

The windows are almost invariably casements opening in with fall-in fanlights over. It is claimed for this type of window, as against the English sash window, that it is less complicated in construction, that the whole area of the window can be opened, as against only half with sliding sashes, and that the casements protect the beds on either side from draughts.

It is not usual to have direct inlets for fresh air from outside to the wards, but extract vents with ducts to the roof are usually provided at ceiling level for use in summer.

For use in winter the simplest form of ventilation is by aspiration, as, for example, that found at Hamburg St. Georg. Here inlet vents are provided at each end of the ward about seven feet above the floor level, through which the fresh air warmed by steam-pipes in the basement enters. Extract ducts to the roof for the foul air are provided at each end of the ward, with vents at floor level.

This form of ventilation is found in many hospitals, with variations in detail, such as the addition of screens for filtering the air, water-troughs for humidifying the air, or the placing of aspirating coils in the extract ducts to increase the ventilation. Mechanical means are often employed, usually by propulsion, occasionally by extraction, by propulsion and extraction combined, or by propulsion and aspiration, each block as a rule being separately treated, it not being usual in the German hospitals to employ a central system.

At Charlottenburg West End the air is led from special intakes through a filter, over a heating battery with humidifying vessel, and into a mixing chamber, where the requisite temperature is attained, after which it is driven by a fan through ducts into the upper portions

Fig. 60.—View in the Park, the Virchow Hospital, Berlin.

Fig. 61.—The Central Avenue, the Virchow Hospital, Berlin.

of the rooms. Extract vents for the foul air are provided at floor level to ventilating turrets on the roof, in which aspirating coils are fixed.

At Schöneberg propulsion is combined with aspiration, the fresh air being drawn by an electric fan through a heating battery, in which it is warmed to a temperature of 60° Fahr., into a very large warm air chamber, which extends for nearly the whole length of the pavilion. From this chamber vertical ducts ascend to the various rooms, a radiator at the foot of each duct raising the ascending air to the required room temperature. The inlet vents are just below the ceiling level, and extract vents at floor level, each with a separate duct, lead the foul air above the roof and into the open.

At the Virchow Hospital, Berlin, propulsion is combined with extraction, there being an electric fan in the basement and one in the roof of each pavilion, it being possible to produce a complete change of air five times per hour in all wards, rooms, and corridors. The fresh air passes over a dust-precipitating chamber, through a cotton-wool filter, and then over a heating battery, after which, mixed with the requisite proportion of cool air, it passes through the ducts into the upper portions of the rooms. The extract vents are placed in the lower portion of the rooms, and the foul air is extracted through ducts to the electric fan chamber in the roof, and driven out through the ridge turrets into the open. In the large wards of the one-story pavilions the fresh warmed air enters at each end, through two vents, each about 2 feet 6 in. by 1 foot 6 in., placed above each of the doors, at a height of 11 feet 6 in. above the floor. The foul air leaves through four vents about 9 in. by 8 in. on each long side between alternate windows and placed 1 foot 6 in. above the floor. In the other rooms of the pavilion the ventilating arrangements are similar to those of the large wards, except in the sink and water-closet rooms, where extract vents only at ceiling level are provided, the ducts from these being kept entirely separate from those of the other rooms until just before the fan chamber.

At Munich III. special dust-depositing chambers and washing filters are employed, while the ducts are oval or circular in section, and can be flushed out.

At the Johannstadt Hospital, Dresden, in which the apparatus is capable of producing a change of air of five times per hour in the wards, the heating and ventilation are combined, being by hot air. The fresh air passes through a heating battery in which it is warmed to a temperature of 59° Fahr., and is then driven by a fan into the large warm-air chamber which extends for the whole length of the pavilion, and serves at the same time to precipitate the dust and to warm the floor above. From this chamber vertical ducts ascend, at the foot of each radiators being placed to warm the air to the necessary temperature for heating the rooms. The ducts, two of which are placed in the centre of the floor of each large ward, are constructed of sheet-iron about three feet long, two feet wide, and six feet high, the top being covered with a grating. The extract vents for the foul air are at floor level, and lead in ducts to extract turrets on the roof.

In such hospitals as Schöneberg or Dresden, where ample room and light are provided, and the ventilating installation can be easily inspected and cleaned, the cleanliness of the system appears to be all that can be desired. In some of the hospitals, however, in which the ventilating rooms are cramped, the lighting deficient, or in which the main ventilating ducts also contain the heating and other pipes, the cleanliness often leaves much to be desired: indeed in the recent extensions to the Frankfort City Hospital no form of mechanical ventilation is being installed, as it has been found that in the older pavilions the ventilating apparatus has got into such a bad state.

The usual amount of fresh air specified for the large wards is 2650 cubic feet per bed with a change of twice per hour, for day-rooms, bath-rooms, and ward kitchens a change of twice, and for sanitary rooms a change of five times per hour.

LIGHTING.

The lighting of the hospitals is almost invariably by electricity, derived either from the municipal supply or from generating plant in the hospital, as at the Virchow Berlin. Whenever possible two supplies are obtained and alternate lights wired from the separate supplies. The fittings are of great variety, some excellent types being found at St. Georg Hamburg. Arc lights are largely employed in the grounds, in the domestic and technical blocks, and for operating theatre work. Gas is also installed in some hospitals in case of breakdown, and is of course largely employed for cooking, sterilising, etc.

COLD WATER SUPPLY.

The water supplies of the hospitals are usually derived from the municipal mains, though at Eppendorf Hamburg and the Virchow Berlin the supply is derived from the institutions' own plant. At the latter three artesian wells have been sunk, from which 10,600 cubic feet of water are raised per hour. Special plant is provided for precipitating the iron which the water here contains, and for filtration. The reservoir is of 8800 cubic feet capacity and is situated on the water tower 158 feet high, the pressure in the supply pipes being three atmospheres.

HOT WATER SUPPLY.

The usual system of hot water supply is to place hot water supply calorifiers in the basement of each block, and to lead steam to them from the central boiler-house, each block being treated separately. At St. Georg Hamburg central hot water supply tanks are provided at the top of the administrative block. At Dresden Johannstadt and the Virchow Berlin the hot water supply is central, at the latter there being three calorifiers in the engine-house block, in which the water is heated by the exhaust steam from the engines to a temperature of from 70° C. to 80° C., and then circulated through the mains under the pressure of the supply from the water tower, thus giving at all mixing valves, etc., hot and cold water at the same pressure.

SANITARY APPARATUS.

Lavatory basins are usually of porcelain, many different types being found. For operating theatre work the supplies are usually combined, giving a jet or spray with elbow action levers, and knee action wastes, pedal action fittings seldom being found.

Baths again are of various patterns, movable or fixed; porcelain, enamelled iron, and copper are found, but the latest and favourite material is nickel-plated steel, which is much employed.

In some hospitals the supply pipes to baths and lavatories stand clear from the walls, but in others, as the Virchow Berlin, they are placed in chases in the brickwork behind the tiled dados, which gives a very smooth finish but is somewhat awkward to deal with when repairs are necessary. With regard to traps, in addition to S and P traps some interesting forms of improved "bell" and "dip" traps are found.

Water-closets are usually of the wash-down type, though closets of the wash-out pattern are often found. The flush is usually from a cistern with pull, although at the Virchow pneumatic supply valves are employed.

The slop-sinks are of various types, those of English porcelain and manufacture being often employed.

The slop-sink disinfectors, as employed at the Virchow Berlin or Charlottenburg [fig. 63], for the disinfection of urine, fæces, and sputum, before discharge into the drains, are of considerable interest. They consist of a cylindrical copper vessel, tinned inside, and having a false bottom, with a sharp fall to the outlet to the drain. To disinfect the contents,

the lid and the outlet to the drain are closed, and steam is turned into the false bottom, the disinfection at a temperature of 110° C. being complete after about 15 or 20 minutes. The steam and gases from the boiling contents are led by a water condenser from the upper portion of the vessel into the drainage outlet below the trap. A ring spray is provided in the interior of the cylinder for the cleansing of the bed pans and other vessels, which can when occasion requires be disinfected in this apparatus.

In the majority of the hospitals well ventilated closets are provided for the retention of fæces etc. for examination by the doctor.

Wash-up sinks are often of porcelain, though the favourite material is perhaps durana metal, which is very largely employed.

DRAINAGE.

Although in some of the German hospitals the details of the drainage would not meet with approval from the English point of view, yet in others it is well up to the English standard, and as a rule the provision for disinfection is always greater.

The drainage system follows in general the English type, the great difference perhaps being that, owing to the climate, all soil, waste, and vent pipes are kept inside the buildings, the drains in the basements, often of cast iron, being suspended from the ceilings. Separate sewage and rain-water systems are often provided.

Many of the municipalities require that before discharge into the public sewers all drainage from the patients' and mortuary buildings must be disinfected. At Hamburg Eppendorf and St. Georg [fig. 64] central installations for this purpose are provided, by which all the drainage is collected in large tanks and treated with lime. At Nuremberg a central system is again installed, the disinfection here being by the Müller-Nansen process. At Dresden Johannstadt a separate installation is provided for every two blocks, the disinfection being by lime. At Charlottenburg West End each ward floor contains a slop-sink disinfector, as already described, in which all fæces, etc., can be disinfected before discharge. This type of apparatus is much employed in pavilions for infectious diseases, as at the Virchow Berlin and Düsseldorf. The drainage from mortuary blocks is usually collected in tanks and disinfected by lime.

TELEPHONE SYSTEMS, ETC.

As a rule all hospitals have a very complete system of inter-departmental telephones; at the Virchow, for example, there are 95 speaking points, of which 20 can be used for external communication, the installation being controlled from a central exchange in the administrative block.

Alarm bells from the wards to the nurses' rooms are also invariably installed, and electric clock systems for recording the alertness of the night attendants are found, particularly in the insane blocks.

Vacuum cleaning apparatus is often installed throughout, as at the Virchow Berlin and Munich III.

COST OF LAND, BUILDINGS, AND EQUIPMENT.

The cost of the various hospitals of course varies greatly according as their locality, construction, or equipment varies. For example at Nuremberg the cost of the site was £6250, the cost per bed of the buildings £175, and of the equipment £39, or a total cost per bed for buildings and equipment of £215, while at the Johannstadt Hospital, Dresden, the cost of the site was £84,000, and the cost per bed for buildings and equipment was £357. In the well equipped and recently erected infectious diseases department at Hamburg Eppendorf for 200 beds, the cost per bed for the buildings has been £483, for the equipment £91, or for

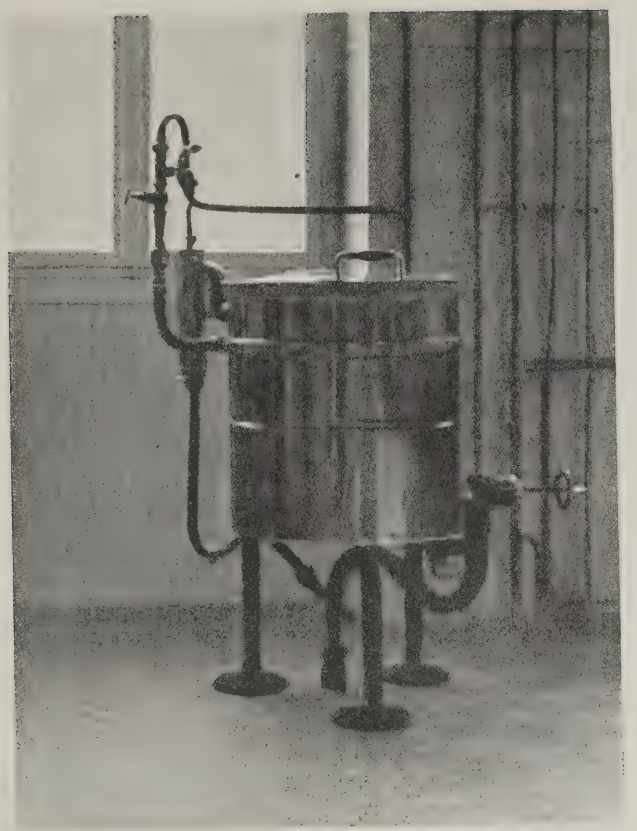


Fig. 63.—Slop Sink Disinfector, Charlottenburg West End Hospital.

Fig. 64.—Drainage Disinfection Installation, Hamburg St. Georg Hospital.

the buildings and equipment together £575, while at the Rudolf Virchow Hospital, Berlin, the cost per bed for the buildings has been £408, for the equipment £68, or for buildings and equipment together £477.

BIBLIOGRAPHY.

The following is a list of modern works on the subject, to some of which the writer is indebted for a number of the illustrations to this paper :—

Deneke. "Die Neubauten des Allg. Kr. St. Georg," Hamburg, 1906.
Depage, Vandervelde, et Cheval. "La Construction des Hôpitaux," 1909.
Greve. "Die Allgemeinen Krankenanstalten in Düsseldorf."
Hagemeyer. "Das Allg. Kr. der Stadt Berlin im Friedrichshain," 1879.
Hagemeyer. "Das neue Krankenhaus der Stadt Berlin Am Urban," 1894.
Hoffmann. "Neubauten der Stadt Berlin. 6 Band. Rudolf Virchow Krankenhaus," 1907.
König. "Das Kleine Krankenhaus," 1901.
Kraepelin und Heilmann u. Littmann. "Die Königliche Psychiatrische Klinik in München," 1905.
Krautwig. "Naturwissenschaft und Gesundheitswesen in Cöln," 1908.
Kuhn. "Handbuch der Architektur Krankenhäuser."
Lenhartz, Reye u. Deneke. "Die Allgemeinen Krankenhäuser und Irrenanstalten der Hamburg," 1901.
Lenhartz u. Ruppel. "Der Moderne Krankenhausbau," 1908.
Leopold u. Reichelt. "Die Neue Kgl. Frauenklinik in Dresden," 1906.
Rath zu Dresden. "Das Stadtkrankenhaus Johannstadt in Dresden," 1902.
Sternberg. "Die Küche im Krankenhaus," 1908.
Wallraff. "Das Allgemeine Krankenhaus der Stadt Nürnberg," 1897.
XIV. Inter. Kongress für Hygiene u. Demographie, Berlin, 1907. "Medizinische Anstalten auf dem Gebiete der Volksgesundheitspflege in Preussen," 1907.

In conclusion the writer would express his best thanks to the members of the staffs of the institutions and to the architects for their invariable courtesy and assistance, and for the facilities which they placed at his disposal on his tour as the Saxon Snell Prizeman, R.I.B.A., 1908, and in particular to the following gentlemen, who have rendered him the utmost assistance and furnished him with plans and information of the greatest value and interest :—

Professor Dr. Aschaffenberg, Cologne.
M. Lucien Bechmann, Architecte, Paris.
M. Henri Belouet, Architecte, Paris.
Herr R. Birkenstock, Hamburg.
Herr Boethke, Regierungsbaumeister, Berlin.
Herr Walter Boche, Sekretär des Architekten-Vereines, Berlin.
Dr. Deneke, Ärztl. Direktor Allg. Kr. St. Georg, Hamburg.
Herr Ebeling, Frankfort.
Herr Egeling, Stadtbaurat, Schöneberg.
Herr Fricke, Baumeister, Cologne.
Mr. E. T. Hall, F.R.I.B.A., London.
Herr Albert Henckel, Kgl. Regierungsbausekretär, Berlin.
Herr Hermann von Hoven, Architekt, Frankfort.
Herr Kleefisch, Stadtbauinspektor, Cologne.
Professor Dr. Emil Kraepelin, Munich.
Dr. J. Kuiper, Amsterdam.
Professor Littmann, Munich.
M. A. Maistrasse, Architecte, Paris.
M. Florentin Martin, Architecte, Paris.
Herr Maxon, Bauamtmann, Munich.
Dr. May, Bürgermeister, Dresden.
Dr. A. Meyer, Berlin.
Herr Ludwig Neher, Kgl. Baurat, Frankfort.
Dr. Pielicke, Beelitz.
Mr. W. A. Pite, F.R.I.B.A., London.
Herr Radke, Kgl. Baurat, Düsseldorf.
M. Rochet, Architecte, Paris.
Herr Hans Rosch, Nuremberg.
Herr Hans Rummel, Architekt, Frankfort.
Herr F. Ruppel, Baurat, Hamburg.
Herr R. Schachner, Stadtbauamtmann, Munich.
Herr Heinrich Schmieden, Regierungsbaumeister, Berlin.
Dr. Simmonds, Hamburg.
Herr Ernst Steinbichler, Architekt, Frankfort.
Herr O. Tietze, Magistratsbaurat, Berlin.
Herr Heinrich Wallraff, Architekt, Nuremberg.
Dr. Ernst Wittermann, Munich.

THE END.

THE CRISIS.

IF I could think of some heading for this notice more arresting and alarming than the word I have chosen I would gladly use it. A desperate case and a possible remedy; these are the subjects of the work I review. It is a "Blue Book," no other in fact than the "Report of the London Traffic Branch of the Board of Trade 1911." We have now had four of these volumes, and the significance of them is tremendous. Their object is to be a sequel to the Report of the Royal Commission on London Traffic, which appeared and (must I say it?) disappeared in 1905. Year by year they continue the investigation begun by that Commission, they bring its evidence up to recent date; they emphasise the urgency of its message, and they revise, when necessary, the proposals for remedy. The price of the book is 5*s.* 4*d.*, and anybody who studies London as a town, from almost any point of view, would find himself interested by the purchase of it.

These Reports come at us like Old Testament prophets with the simple and insistent repetition of a message so weighty, so clear, and so deeply urgent, that nothing except man's habitual deafness to prophecy can explain or excuse the apathy with which they are received.

Of course, bad news can always be set aside, and remedies can always be postponed. The most dramatic conclusion of the present matter would be that in this case also the tidings should be disregarded and the advice ignored. The climax—a perfectly certain and (historically) very interesting climax will then follow; but it is doubtful whether our successors will take full enjoyment in a dénouement which, however successful as a fulfilment of foreboding, will be to the onlookers and participators disastrously costly.

What is the value and significance of this Report, and why is its significance so urgent? The answer, I think, may be put thus: We have here no amateur suggestion for a London improvement; no mere guess at the nature and extent of the mischief to be dealt with; still less have we the irresponsible utterance of an untrained corporation. We have instead a pronouncement of quite unusual authority and weight.

Do we Londoners at all realise that as a sequel to much private opinion which is, of course, contradictory, and to the Royal Commission which is (quite unjustly) ineffectual, we have now got a department of a Government office dealing with the London problem in a systematic and energetic—if for the moment theoretic way?

Do we realise that, instead of listening to the utterances of lecturers and newspaper correspondents or even to Royal Commissioners, we are now getting facts and advice from a body which has authority and executive power?

That the subject, which is architectural in the highest sense, should be handled without acknowledged architectural advice I regret profoundly, but I do so with the conviction that the department, which has already gone so far and so well, will before long assist England and London to rectify that omission.

Obviously the laborious collection of facts upon which the arguments of this book are based has not been brought together without the labour of many men, but, though one must not look upon a Government publication as the work of an individual, it is easy to see that there has been a guiding mind of exceptional strength, and we shall not be far wrong in identifying the ruling intelligence with that of Sir Herbert Jekyll, whose name is subscribed to the Preface.

Briefly his message to London is that London's traffic difficulty is increasing; that although the improved means of locomotion introduced during the last ten years were in themselves so effective as for a time to outstrip the ever-growing pressure, crisis is still upon us, and must be dealt with. An immense growth of population in the outskirts, so far from being relieved by an actual diminution of population in the centre, indicates that for the purposes of daily entry to the working quarters of the town a larger number have to be conveyed over a greater distance, and all these facts relating to the new distribution of population are set forward, not merely in general terms, but in well-attested and minute statistics.

We are thus brought at once to the consideration of the road improvements which form the gist of the compiler's advice. These proposals, both as regards the widening of existing roads and the formation of new routes, are best studied on one of the maps with which the Report is accompanied.

The map entitled "Plate I." is that to which I specially refer. It deals with a radial distance of twenty miles from St. Paul's, and it aims, as one would expect, at counterbalancing that defect from which London suffers in common with all large towns—the existence between the main arterial roads of wedge-shaped tracts, which might very properly be occupied both by relief roads tending towards the centre, and by one or more circumferential roads.

Of the former type we observe such suggestions as the oft discussed Brentford Bypass (which is to run north of Brentford High Street); the proposed western avenue which, starting from Paddington, is to join the Oxford road just beyond Uxbridge; a short branch route from the St. Albans road, which, if it had been made a few years ago, would have saved the beauty of Edgware, now miserably disfigured; a new Cambridge road, spacing and relieving the crowded Edmonton thoroughfare; the new Eastern Avenue, which gives an alternative for the Colchester road as far as Romford; a new route through Camberwell to Lewisham; and, again, another in the Surbiton district.

All these roads taken in connection with intended widenings of existing main thoroughfares may be regarded as excellent and well-thought-out expedients towards the relief of the traffic between outer and inner London.

The next feature that attracts our attention—and it is a most interesting feature—is the proposal for circular or circumferential roads north and south of the Thames. From Charing Cross as a centre and with a radius of seven and a half miles turn an arc from Kew Bridge to Wanstead and that will give you within a little the course of Sir Herbert Jekyll's northern proposal. It is most ingeniously planned so as to make use of a bit of existing road where possible and to intrude as little as may be upon land already under costly occupation. The intended southern arc is of rather shorter radius and runs from Battersea to Woolwich *via* Lewisham.

No suggestion is made of completing the circular girdle by linking up from Kew to Battersea or from Woolwich to Wanstead, but in view of the fact that a Thames tunnel is in course of construction at Woolwich it would seem at least desirable to aim at such measures as would make these new routes completely circumferential.

The attempt to give anything like a summary of the information and suggestions contained in the Report would fill a very long review. It is enough to say here in conclusion that its importance at the present juncture hinges not merely upon the urgency of the traffic trouble but also and almost equally on the fact that several of the suburbs are engaged in producing (whether under the Town Planning Act or independently) schemes for the laying out of building estates and the formation of new roads. In this connection it is of the utmost importance that the much-desired general scheme, which this Report so warmly and so wisely advocates, should be formulated, adopted, and authorised; otherwise the present golden opportunity may be lost.

Road improvements and road additions recommended here could quite easily be incorporated in such suburban land schemes as are at present under contemplation, and in the case of plans ratified under the Act it will be perfectly easy for the Local Government Board to insist upon such incorporation. If, however, no general plan is enforced, mistakes may now be made which will in their turn contribute additional load to the costly burden which our unpardonable delay is laying upon the future.

I venture to repeat once more a small suggestion which I made last year as to the valuable maps. In future editions the actual positions of the roadside towns should be made clearer. No one, for example, would gather from the method of nomenclature adopted that the "Watling Street" road passes through Edgware and Elstree, and the very important road-town Hounslow is once again entirely omitted from some of the maps.

PAUL WATERHOUSE [*F.*].

THE FUTURE OF LONDON.

LONDON is overwhelming in its claims and needs. As the greatest city the world has ever known, in its extent, population, and variety of interests, it has outgrown all proper design, from both an artistic and a practical point of view. Viewed in its artistic aspect it is certainly not the greatest or finest city, and yet it is possibly not too late for it to become so. If about one hundred years ago the whole subject of London development had been taken in hand and some settled scheme been adopted, many bad and ineffaceable blunders would have been avoided. But new streets have been laid out, great and important buildings erected, and areas cleared in an arbitrary and interjectory fashion which can never produce satisfactory results. It is inconceivable that there will not be, before very long, some executive body which shall be primarily and finally responsible for the future of this great city. But, knowing the past records of most governing bodies, it is almost hopeless for us to expect that adequate consideration will ever be bestowed on the artistic aspect of this future. And it is only by the maintenance of great ideals and a persistent endeavour to attain them that any real measure of success will be achieved. To attain this object it is suggested that a body of opinion should be collected and reinforced from time to time to stimulate public interest and effort for the elevation of London into a fine city, worthy to be the capital of a great empire. Surely it is time that all who are interested in the future of this great city and can do any service on its behalf should bestir themselves to rescue it from the *laissez-faire* condition which now exists and which must have disastrous results? Those with whom we have conferred on the subject seem as much appalled at the task of saving London as they are at the fate which must befall it, unless some wise and concerted action be taken. Things are happening every day which make the task a harder one, and very serious questions are now before us which call for wise counsel and energetic action. Let us call to mind a few of these.

The new St. Paul's Bridge is surely a subject of debateable interest—whether we take it from the point of view of traffic or art. No one dare pretend that art must go before traffic of course, but we have seen it very ably and convincingly stated that, from the point of view of traffic, the new St. Paul's Bridge will be a great mistake, and that the traffic would be much more congested if poured out at the east end of St. Paul's than if it found its way right and left of the south transept. Some of us think that no great modern project has been a greater mistake than the proposed St. Paul's Bridge or more likely seriously to injure the artistic aspect of London.

Then we have the question of lines of traffic

generally in London. No one doubts that they need serious consideration, and some suggest that a great ring road should be formed and some effort be made to provide better lines of intercommunication and to relieve congestion of traffic.

Great developments have taken place at Westminster, and new Government Offices, a Town Hall, and other public buildings are now going up, all of which might have been productive of a fine and well-ordered effect had the sites and frontages of projected buildings come under the consideration of a body of well-qualified experts.

Trafalgar Square presents the most splendid possibilities quite within the range of practical politics, and we know of a great scheme for this which would be forthcoming at once were there any chance of its being carefully considered by a competent body. The new entrance from the Mall brings the Trafalgar Square improvement into the front rank of necessary London developments.

The County Hall is creating a new and important centre on the south side of the Thames, and we consider it a blot on our government and control of London that it is just dumped down at a corner of Westminster Bridge without any wise and sensible provision for the creation of a fine environment. It has actually been suggested that a great Indian Museum should be ranged alongside it!

The Memorial to King Edward is being projected for a site on which we can hardly believe any large bulk of expert opinion is agreed and which suggests that it was chosen as a policy of despair.

A really fine scheme of continuing the Thames Embankment westward from the Houses of Parliament was nipped in the bud because it was a private enterprise, and it is doubtful whether anything really fine is ever likely to take its place.

For long we have wondered why fine roadways from the Strand and Fleet Street down to the Thames Embankment could not have been created. A magnificent scheme for a roadway up from the Embankment to the Strand and opening out to the Law Courts would once have been possible.

That the British Museum should long since have been opened out by a roadway from its main entrance to Oxford Street appears almost to go without saying and is surely not yet an impossible vision.

When we take into account the things which have been done and which can never be undone, the lack of foresight is truly appalling. The lost chances of Ludgate Hill leading up to St. Paul's from Ludgate Circus are amongst the most lamentable of all. The spreading out of the great railway termini along the northern part of central London is a mighty and irretrievable blunder which is now being partly repeated by the isolated action of the underground tube constructions.

No greater improvement for London could be imagined than the doing away with Charing Cross railway bridge and the creation of a fine terminal station for the South Eastern Railway about Waterloo. Every year which passes by adds enormously to the difficulties of this improvement.

The lack of a great southern embankment to the Thames is one of the most obvious and outstanding failures of London in rising to the greatness of its opportunities.

One might continue a list like the above almost indefinitely. The outlook over the past as regards lost chances and even the future, or as regards fine possibilities, is so significant as to be almost overwhelming. Is there not then an urgent need for the creation of some permanent and active expert advice which may at all times be on the alert to promote the artistic development of the city? It is not a question of the expenditure of millions of pounds to add to the burden of the over-taxed ratepayer. It is a question of how the constant development of streets and great building enterprises may be guided and controlled to the best results, of how expenditure which is inevitable may be laid out in the most desirable way, and how costly and unworthy schemes may be prevented from realisation. Could not a London Society be formed to promote the great objects we have in view and so help to lay the foundations for a fine imperial city?

T. Raffles Davison [*Hon.A.*].

THE LATE HONORÉ DAUMET.

Although not the senior, M. Daumet was better known than any other of our French corresponding members, owing to his frequent visits to England and the fact that he made a point of attending all the International Congresses here and in other countries, being always accompanied by Madame Daumet. M. Daumet was born in Paris in 1826 and entered the Ecole des Beaux-Arts in 1846, passing into the first class in 1849. He was a pupil in the atelier of Blouet, the author of the publication on the "Baths of Caracalla" and of his successor, Gilbert. He carried off the Grand Prix de Rome in 1855, and his principal "envoi" was the Villa of Hadrian at Tivoli, together with a conjectural restoration of the same. The work was of so extended a nature that he persuaded some of his pupils, also Grand Prix men, to continue the researches in later years. M. Daumet was elected a member of the Institute of France in 1885, and was created Chevalier, Officier, and Commander of the Legion of Honour in 1865, 1892, and 1900, respectively. He was also Commander of the Order of Alfonso XII. of Spain, Knight of the Order of Pius IX., Officier de l'Instruction Publique, and in 1908 he was accorded the Royal Gold Medal of the Institute, to which he attached the greatest value.

His principal works were the Palais des Facultés at Grenoble, the Palais de Justice, Paris, in con-

junction with M. Louis Duc, after whose death he designed and carried out the "Cour de Cassation" and the "Cour d'Appel," the Palais de Justice in Grenoble, and the restoration of the Roman Temple and of the Church of St. Pierre, both at Vienne in the south of France. One of his earliest works was the buildings of the Etats Pontificaux for the Great Exhibition of 1867. In 1874 he was attached with M. Heuzey to an archæological commission appointed to survey the ancient architecture of Macedonia, where he discovered the remains of a palace at Palatizza, of which he made a conjectural restoration; the results of this expedition were published in 1876, and there is a copy, presented by M. Daumet, in our Library. One of the most important of M. Daumet's commissions was the rebuilding of the Château of Chantilly, which, with the exception of the Henri II. wing, had been entirely destroyed at the time of the Revolution. This work was entrusted to him in 1876 by the Duc d'Aumale, and it took six years to complete. In 1862 he started a private atelier, and no fewer than nine Grand Prix de Rome students were trained by him, one of them being the late Mr. McKim to whom the Royal Gold Medal of the Institute was accorded in 1903. M. Daumet served on the numerous juries of the Ecole des Beaux-Arts and on the Commission des Monuments Historiques; he was Hon. Architecte-en-Chef of the Department of the Seine, Hon. Inspector of the Conseil d'Architecture de la Ville de Paris, member of the Société des Architectes diplômés par le Gouvernement and of the Société des Artistes Français, and was Past President of the Société Centrale des Architectes Français. About seven years ago M. Daumet organised an International Committee for the protection of the professional interests of architects, chiefly in relation to copyright in architectural design; of this committee he was elected Chairman and he devoted his energy and perseverance to its promotion.

His last work was that of the completion of the restoration of the Palais de St. Germain, to which he devoted the last ten years of his life and of which there is a descriptive account, illustrated, in our Library.

M. Daumet attended the International Architectural Congress in Rome last October, and subsequently with Madame Daumet renewed his acquaintance with Florence, Venice, and Turin. He wrote me a letter on the 30th November in which he stated that the state of his health was normal, and that he was able to work on his drawings, his only trouble being a certain fatigue when walking; three days later, however, he was taken ill, and he passed away on the 12th of this month. M. Daumet married, early in the sixties, the eldest daughter of M. Charles Questel, the architect of the Cathedral of Nîmes and the Church of St. Paul in that town; he also was the patron of the atelier from which many Grand Prix students were sent to Rome; in fact, when I entered the atelier in 1858 there were five students, each of whom eventually carried off that prize. It would seem that he caught a chill when attending a jury appointed to select the best designs in a competition for the buildings projected for the École Militaire in the Champ de Mars, and from this he never recovered. M. Daumet was buried in the cemetery of Montparnasse on Friday, 15th December, a previous service having been held in the Church of St. Sulpice.

R. Phené Spiers, F.S.A. [*F.*].

DAUMET. A Personal Note.

Honoré Daumet is dead! By reason of his years, exceeding by five the Psalmist's fourscore, his death can hardly be called unexpected, but it will be felt as something of a shock by those who met him during the recent meetings of the International Congress at Rome, where his assiduous vigour amazed his younger colleagues. "Il est de bronze," said one of his friends. The members of the Comité Permanent especially will mourn the loss of the venerable though alert figure, who for many years presided over their meetings with dignity and unvarying courtesy.

He was greatly beloved by his brother artists. Not the least enviable of the advantages of his French atelier system is the tender reverence with which such masters as Daumet and Pascal are regarded by the men of a younger generation, even when these are of equal or, it may be, of superior, position and attainments. The effect of the continuous tradition of art and training is to keep the elder men in close touch and sympathy with the younger; and to preserve throughout their lives a cordial intimacy, which with us exists only in rare and individual cases. Emulation in France is keen enough as between men of like age, but that hard and jealous competition between young and old which tends to keep them apart is almost unknown.

The scent of my "Maryland," as I write, brings kindly memories of the old artist at his desk, working on a delicate and beautiful small-scale drawing of a great stairway at Nice, for the late King Leopold, which might have tried even youthful sight. "His eye was not dim, nor his natural force abated."

Daumet, Pierre-Jérôme-Honoré, Membre de l'Institut, Grand Prix de Rome, Gold Medallist of the Royal Institute of British Architects, a very perfect type of the French gentleman, was born in Paris in 1826, and has now gone to his rest, full of years and full of honours. R.I.P. Fiant novissima mea horum similia.

John W. Simpson [*F.*].

9 Conduit Street, London, W., 23*rd Dec.* 1911.

CHRONICLE.

The Newer Responsibilities of Architects.

Of the four Papers on "The Newer Responsibilities of Architects" arranged by the Practice Standing Committee and announced for reading at the General Meeting last Monday, it was found desirable, having regard to the time at the disposal of the Meeting and to the fact that one of the Papers dealt with a case which is to be the subject of further litigation, to read only the two prepared respectively by Messrs. W. Henry White [*F.*] and Edward Greenop [*A.*]. These will be published in the next number of the Journal, together with the important speeches delivered on the occasion by Messrs. A. M. Brice and G. R. Blanco White, Barristers-at-law. On the motion of the President, further discussion was adjourned to a date hereafter to be fixed, when the Papers by Messrs. A. Saxon Snell [*F.*] and Wm. Woodward [*F.*] will be read. It is intended that the discussion at the adjourned Meeting should cover the ground of the whole four Papers.

Architects of the Office of Works.

The following questions and replies were printed in the Parliamentary Papers of the 15th inst. :—

Mr. Noel Buxton: To ask the honourable Member for Southampton, as representing the First Commissioner of Works, whether his attention has been called to a recent Address delivered by Mr. Leonard Stokes, the President of the Royal Institute of British Architects, in which he has expressed his dissatisfaction with the work done by the architectural staff of His Majesty's Office of Works; whether he will state the classes and the total number of architects employed in his department; and what number of them are Fellows, Associates, or Licentiates of the Royal Institute of British Architects.

Mr. Dudley Ward: The answer to the first part is in the affirmative.

There are two principal architects employed, both of whom are Fellows of the Institute. In the next class, architects and surveyors, there are ten employed, of whom six are Associates and one a Licentiate of the Institute. The next class consists of nineteen assistant architects and surveyors, of whom five are Associates of the Institute. There are twenty-seven assistant architects and surveyors of the second class, of whom thirteen are Associates of the Institute.

Since 1907, twenty-three architects and surveyors have been appointed, of whom thirteen are Associates of the Royal Institute of British Architects.

Mr. Noel Buxton: To ask the honourable member for Southampton, as representing the First Commissioner of Works, whether his attention has been drawn to the Address delivered by Mr. Leonard Stokes, the President of the Royal Institute of British Architects, on the 6th November; whether he will state the percentage which the cost of the architectural staff of His Majesty's Office of Works for salaries alone forms of the whole outlay; whether he will state what buildings have been entrusted to independent architects, not in the Office of Works, during the last sixteen years; and whether, in the interests of economy, he is prepared to consider the desirability of abolishing the architectural staff of the Office of Works and entrusting the work to independent architects.

Mr. Dudley Ward: The reply to the first paragraph is in the affirmative.

In reply to the second paragraph, the percentage which the cost of the architectural staff of His Majesty's Office of Works for salaries alone forms of the whole outlay is 3·34, and not $6\frac{1}{4}$ per cent., as stated.

In reply to the third paragraph, the following buildings have been entrusted to outside architects:. (1) Government Offices, Whitehall, southern building; (2) New War Office; (3) New Admiralty, Block III.; (4) New Admiralty, Block IV.; (5) Victoria and Albert Museum Extension; (6) Royal College of Science, Imperial Institute Road; (7) British Museum Extension.

In reply to the last paragraph the answer is in the negative, although the First Commissioner will be prepared to consider any exceptional conditions which might render it desirable in the future, as in the past, to entrust certain specific works to architects outside his department.

Office of Works Architectural Assistants.

Mr. Dudley Ward, in the House of Commons last week, informed Mr. Snowden that before any steps were taken to place any of the class termed architectural assistants engaged with the Office of Works on the established list, the desires of all who were so eligible would be ascertained, so that all of the class should have an opportunity if they so desired of being placed upon the established list. He also stated that the Treasury did not regard the technical certificate of the Board of Works Commissioners granted to each member of the architectural assistants as being equivalent to the certificate

granted by the Civil Service Commissioners to the class engaged upon similar work and termed assistant architects. It was not intended to carry the same privileges of establishment, equivalent pay, superannuation, and regular annual increment.

Gift to the University of London.

At the meeting of the Senate of London University on the 13th inst., the Principal announced that he had received from the Chancellor (Lord Rosebery) a letter written to him by a gentleman, who desired for the present to remain anonymous, offering to erect at University College "the buildings for (*a*) the combined School of Architecture [resulting from the amalgamation of the schools at present separately conducted at University College and King's College], together with the following—so far as a sum of £30,000 will suffice—viz.: (*b*) Studios for the teaching of sculpture and the rearrangement of the School of Fine Art, and (*c*) the Department of Applied Statistics, including the Laboratory of Eugenics." A resolution was passed expressing the Senate's cordial appreciation of this munificent offer, and the matter was referred to the Academic Council, to the University College Committee, and to the Finance Committee for their consideration and report. The name of the donor of the sum of £30,000 must, for the present, remain unknown, but it may be stated that it is a person with a keen interest in architecture who desires "to see the completion of one of the most beautiful buildings in London." The new buildings are to be erected at the north-west of the present building. The Senate of the University will, it is expected, be in a position to proceed with the work as soon as the two committees have formally dealt with the subject. The new buildings will be in keeping with the existing main block, and will occupy a site slightly recessed from, but on the frontage of, Gower Street. With the new chemical laboratories, which are to be built on the north side of the University College property, the premises will form a very important and extensive block.

New Scheme of Art Education.

With the approval of the Standing Committee of Advice for Education in Art, the Board of Education have drawn up a scheme for the revision of the existing arrangements for examinations in art and for the issue of teaching certificates for teachers of art, to come into force in 1913. It is hoped that detailed syllabuses, together with full regulations, will be ready for issue at an early date in the coming year. Under the new scheme (which is described in Circular 786) it will be possible for a teaching certificate to be obtained after a course of studies in art, covering some five or six years and terminating at the age of 21 or later, according to the time actually devoted to the course and the age at which the candidate left a secondary school or other place of general education. In recommending the adoption of the scheme, the Standing Committee pointed out that it does not preclude the desirability of a more advanced course (analogous to what is known as a "post-graduate" course in University work) at the Royal College of Art or elsewhere for candidates for headmasterships and the higher positions on the teaching staffs of schools of art. The Board consider that such a course might in many cases be taken with advantage, and are further of opinion that those in whose hands the appointment of teachers rests will tend more and more to require, in addition to such qualifications as can be tested by examination, some evidence of the actual and successful practice of some branch of fine or applied art.

Town Expansion and Open Spaces.

In an article under the above heading in *The Times* of the 14th inst., it is pointed out that by what may at first sight seem a curiously paradoxical law the provision of open spaces in Central London tends to make the need for them acuter on the outer fringe. Some of the most crowded London areas, as well as some of the most central and convenient, have been turned in recent years into some of the emptiest; and the Londoner who returned to-day from a twenty years' sojourn abroad would probably be as greatly struck by the denudation of a considerable slice of Bloomsbury, overlooked by the new wing of the British Museum now nearing completion, as by the substitution of a railway terminus and its approaches for most of the once notorious slum area of Lisson Grove, or the transformation of the squalid alleys of Clare Market into a region embellished with spacious highways and a new opera-house. But the displaced population must find a home somewhere, and the disturbance caused by its migration is felt far beyond the districts immediately affected. The outward wave from Central London meets the inwash of the steady tide from the country, and the united volume distributes itself over a network of loosely-knit suburbs which are rapidly extending to a distance of thirty or forty miles from Charing Cross. It is as urgent a matter to preserve the best of the existing open spaces in what are still generally regarded as the outer suburbs, or even the open country, as to provide new ones in the densest quarters of East and South London. Fortunately, the necessity is being realised, though not sufficiently rapidly in all quarters to keep pace with the advance of building. *The Times* article emphasises the need of care and foresight to retain as far as possible the best natural features in the country for the refreshment of coming generations. Careful preservation of such features is the root principle of the most intelligent schemes of town-planning; and every new suburb ought to be laid out so as to make the most of such attractive objects as old trees, or distant views, or clear pools and streams. While the scope of garden cities and town-planning schemes is not small, the whole face

of the country in the neighbourhood of every growing centre of population should be safeguarded from merely wanton defacement, and made available as far and as long as possible for public recreation and enjoyment. Obviously no one body, however authoritative, can control so wide a field; and the realisation of this ideal of civic development must depend upon the enlightened sense of the whole community. Though the widest opportunity lies naturally with those who own land, or are able to buy it and dedicate it to the use of the public, the poorest as well as the richest can exercise a powerful influence upon the utilisation of any tract of country to the widest public advantage. The readiness of landowners to grant public access to their land depends to a very great extent on the way in which the public behave when admitted; and the best provocative of generosity is a proved capacity for intelligent and orderly appreciation, such as is conspicuous in the attitude of the populace towards the London parks.

The Aldwych Site: Proposed Australian Government Offices.

The House of Representatives, and subsequently the Senate of the Australian Commonwealth, have approved the decision of the Federal Government to purchase the freehold of the eastern portion of the Strand-Aldwych site. It is proposed to erect upon the site a building for the official headquarters of the Commonwealth, and probably also of some of the Australian States and possibly New Zealand. The cost of the building is estimated at £223,000, and the amount to be paid to the London County Council for the freehold site is £364,000.

Sir George Reid, the High Commissioner for Australia, states that the Commonwealth Government propose to give the Australian States the opportunity, if they should desire it, of having the offices of their Agents-General upon the Strand-Aldwych site. The State of Victoria has already built offices on the south-western portion of the land; the building which is about to be erected will occupy the remainder of the site, and have a frontage to the Strand, Aldwych, and Melbourne Place of 624 feet. There will be eight stories, including the basement and the ground floor; and there will be three main entrances in the thoroughfares mentioned. At the eastern corner of the building, opposite the Gladstone statue, there will be another entrance, leading into the exhibition hall. The exterior of the building will be Renaissance in character, and will be faced with Portland stone. Along the Strand and the Aldwych frontages there will be balconies and colonnades. The dome upon the present Victoria building will be reproduced upon the eastern portion of the new building. There is a bronze figure of Progress, by Mr. F. W. Pomeroy, A.R.A., upon the existing dome, and probably a similar figure will be placed upon the new dome. The exhibition hall, to which the eastern entrance will give access, is to occupy nearly the whole of the ground-floor level. It will be lighted partly by two large glass domes in the middle of the block. This hall will have an area of 12,300 square feet, and the floor and columns will be of Australian marble. The hall will be used for the purpose of displaying the natural products of the various Australian States. The building will also contain, on an upper floor, a lecture hall, reception hall, and library, 3,500 square feet in extent. The remainder of the building will be occupied by the offices of the High Commissioner for Australia and of the various Australian Agents-General, and by business firms interested in the Australian trade. Mr. A. Burr [*F.*] is the architect.

Victoria and Albert Museum: Recent Acquisitions.

The following are among the more important examples of old English furniture which have been recently acquired by the Victoria and Albert Museum:—

To the collection of English Gothic woodwork has been added a portion of a rood screen of oak, still bearing traces of its original colour. It dates from the late 14th or early 15th century, and the western front of the screen, of which this portion formed the eastern, is still *in situ* in Tilbrook Church, Bedfordshire.

The examples of Tudor furniture in Room 6 have been increased by the acquisition of four finely carved bed-posts of the time of Henry VIII., and those of the Elizabethan period in Room 52 by a writing desk elaborately inlaid with architectural designs of the type commonly known as "Nonesuch" from their resemblance to the façade of the palace of that name built by Henry VIII.

The additions to the walnut furniture of the 17th century comprise a Cromwellian armchair, several Charles II. chairs, including one very elaborate example, and a chair of rare form intended for the use of a child (Room 54).

Several important examples have been added to the collection of marquetry furniture of the time of William and Mary in Room 55. Amongst these is a chest of drawers, with cabinet above, dated 1688.

To about 1700 may be attributed a recently acquired complete upholstered bedstead with curtains and canopy, from Welford-on-Avon, and a corner cupboard or buffet of carved pine bearing the arms of Hicks, lately removed from an old house in Bristol. The latter of these two objects is to be seen in Room 56; the former is being prepared for exhibition.

To the collection of 18th century clocks in Rooms 55 and 56 have been added two so-called "grandfather" clocks in dark-green English lacquer, both bought in Spain, one of which was given to the Museum by Mr. L. Harris; a similar tall case clock, of later date, in inlaid mahogany of Lancashire make, given by Mr. Emile S. Mond; and a bracket clock of mahogany and olive wood.

The rare furniture of the early Georgian period,

previously almost unrepresented in the Museum, is now illustrated by a choice carved and gilt mirror, the gift of Sir Edward Stern. This mirror closely follows the style of the well-known architect and designer William Kent, and was probably designed by him for Frederick, Prince of Wales. It is exhibited in Room 56.

The chief addition to the furniture in the Chippendale manner consists of an historical chair, being the President's Chair of Lyon's Inn, one of the old Inns of Chancery, the buildings of which dated from the early part of the 18th century and were destroyed in 1862. This important example of mid-18th century woodwork will shortly be placed on exhibition.

THE AUTUMN EXAMINATIONS.

Preliminary.

The Preliminary Examination, qualifying for registration as *Probationer R.I.B.A.*, was held in London and the provincial centres mentioned below on the 20th and 21st November. The Board of Architectural Education, reporting the results to the Council, state that, of the 95 candidates admitted, 37 were exempted from sitting, and the remaining 58 were examined, with the following results :—

Centre	Total examined	Passed	Relegated
London . . .	40	27	13
Bristol . . .	7	6	1
Leeds . . .	3	2	1
Manchester . .	6	5	1
Newcastle . .	2	2	0
	58	42	16

The passed candidates, with those exempted, making a total all together of 79, have been registered as Probationers, and are as follows :—

ALLUM : Stanley Charles; 24 Chichester Road, Westbourne Square, Paddington, W.
ANDREW : Harry; 56 Whitefriargate, Hull.
ATKIN-BERRY : Henry Gordon; 23 Old Broad Street, E.C.
BARLEY : Francis Alfred; 10 Canewdon Road, Westcliff-on-Sea, Essex.
BARLOW : Smith; "Holly House," 103 Edgeley Road, Stockport, Cheshire.
BISIKER : Arthur Milton; 60 Crouch Hall Road, Crouch End, N.
BLACKPOOL : Joseph; Dunclent, near Kidderminster.
BOWMAN : Arthur William; 31 Roland Gardens, S.W.
BRADSHAW : George; Moss View, Chain Bar, Failsworth, Manchester.
BRADSHAW : Harold Chatton; 30 Heathfield Road, Wavertree, Liverpool.
BRINKWORTH : Edwin Aubrey; Stowell Farm, Corsham, Wiltshire.
BROOKS : Christopher John; 1 Bessborough Gardens, S.W.
BRUETON : Bertrand Frederick; North Petherton, Bridgwater, Somerset.
BURGORD : James; Woodlands, Gresham's School, Holt, Norfolk.
CALDWELL : Wilfrid; "Elmsdale," Penzance.
CAMERON : Allan George; Heath Mount, South Side Road, Inverness, N.B.
CARRERAS : Louis Ernest; 48 Wellington Road, St. John's Wood, N.W.
COOPER : Carilef Miles; 27 St. Mark's Crescent, Regent's Park, N.W.
COOPER : James Gough; 52 Gowan Road, Willesden Green.
CROSSLEY : George; 117 Upper Woodlands Road, Bradford, Yorkshire.
CROWTHER : Joseph Hawkyard; 42 Huddersfield Road, Elland.
CURTIS : Herbert Lewis; 2 Anson Road, Tufnell Park, N.
DANGERFIELD : Paul; "Westcott," Battlefield Road, St. Albans.
DREW : Stanley Thomas; "Mayfield," Grove Park, Kent.
EVANS : Frederick Hardcastle; "Gwenfred," College Road, Moseley, Birmingham.
FEIRN : John Laurence; Rose Cottage, Windermere.
FORBES : William Alexander Stanhope; Higher Faugan, Newlyn, Penzance, Cornwall.
FOSTER : Kimberley George; The Globe, Buckfastleigh, South Devon.
FRAME : Robert; Maryville, Larkhall, Scotland.
GOSSLING : Hugh Foley; Annandale, 15 Birdhurst Road, South Croydon.
GRAY : Andrew; 64 Duncombe Road, Hertford.
GUTTERIDGE : Richard Howard; 44 Bernard Street, Russell Square, W.C.
HARRIS : Wilfred Henry; 33 Sydney Road, Stoke Newington, N.
HARRISON : Harry St. John; 102 Holly Avenue, Jesmond, Newcastle-on-Tyne.
HITCH : John Oliver Brook; 60 Harleyford Road, Vauxhall, S.W.
HUNT : Reginald; "The Homestead," Sunningwell Road, Oxford.
HUSTLER : Colonel Bedford; 18 Church Street, Castleford, Yorks.
JACKSON : Robert Dunnett; 16 Fairview Road, Oxton, Cheshire.
JACOB : John Henry; The Close, Salisbury.
JEFFREYS : Harold Murton; 127 High Street, Maldon, Essex.
JEYNES : Herbert Jesse; 149 Winson Green Road, Birmingham.
JOHNSON : Campbell MacAlpine Cameron; Monteith, Stroud Green, Gloucester.
JOHNSON : Henry Andrew; c/o J. H. Woodhouse, Esq., Singleton Lodge, Heaton Moor, Manchester.
KEY : William Donald; "Glen Caladh," Upminster, Essex.
LANGDELL : George Arthur; 173 Vauxhall Bridge Road, S.W.
MACBEAN : Ian B.; 7 Leopold Road, Ealing Common, W.
MACPHERSON : Hugh; 94 Battlefield Road, Langside, Glasgow.
MARNER : George Lionel Stuart; Architects' Dept., Metropolitan Asylums Board, Victoria Embankment, E.C.
MARTYN : Egerton Alwyn Lawer; Brynhyfryd, Albany Road, Redruth, Cornwall.
MERCER : John Frederick Lees; 11 Park Mount, Revidge, Blackburn.
MILNES : Frank; 79 Hillhouse Lane, Huddersfield, Yorks.
MOERDIJK : Gerard; 10 Watford Villas, Battersea Park, S.W.

MOSLEY : Arthur Roy; c/o Messrs. Spurrell & Murray, 24 Gildridge Road, Eastbourne.
OMAR : Ismail; 59 Parliament Hill, Hampstead, N.W.
PALMER : Arthur James; 12 Lady Margaret Road, N.W.
PAUL : Henry, Junr.; 141 South Ealing Road, Ealing, W.
PITE : Robert William; 13 Elm Grove Road, Ealing, W.
POWELL : Frank Howard Newman; Sea Lodge, West Hill Road, Bournemouth.
PYE : James Frederick; Lindum House, Hainton Avenue, Grimsby.
REMEDIOS : Ricardo Maria dos; 26 Portsdown Road, Maida Vale, W.
RIX : Alec Donald; Norwich High School for Boys, St. Giles' Gates, Norwich.
ROBINSON : John Joseph; 39 Montpelier Road, Kentish Town, N.W.
ROGERS : John Raymond; c/o Messrs. Quick & Lee, 11 Waterloo Place, Leamington Spa.
ROUTLEY : Leonard James; 17 Cleveland Street, Taunton.
RUDMAN : Walter; 23 New Road, Chippenham, Wilts.
SHACKLETON : Frederick Harry; 33 Cobden Street, Luton, Bedfordshire.
SHIBLEY : Albert Reginald; 5 Mina Road, Merton Park, Surrey.
SMITH : Charles Harold Norman; 2 Cromer College, Norfolk.
SPURWAY : George Vyvyan; Ford Bridge, Milverton, Somerset.
STANLEY : Leslie Stuart; "Kylemore," Chesterton Road, Cambridge.
TANNER : Edgar Allan Davey; 18 Hestercombe Avenue, Munster Road, Fulham, S.W.
THOMAS : David Reece; Bryncastell, Llangadock, South Wales.
THOMAS : Harry Morgan; 80 Holland Road, Maidstone.
THOMSON : John Stewart; 12 Salisbury Road, Wimbledon, S.W.
TUNNARD : Henry Bartholomew; 156 Denmark Hill, S.E.
WAGER : Frank; Aston Cross, Birmingham.
WALKER : Stewart Edgar; c/o Messrs. Walsh and Nicholas, 10 Harrison Road, Halifax.
WILLIAMS : Llewellyn Edwin; Ingram House, Stockwell, S.W.
WILLIAMS : Percy James; "Carne," Carmarthen.

Intermediate.

The Intermediate Examination, qualifying for registration as *Student R.I.B.A.*, was held in London and the undermentioned provincial centres on the 20th, 21st, 23rd, and 24th November. The Board of Architectural Education report to the Council that 100 candidates were admitted and examined, with the following results :—

Centre	Total examined	Passed	Relegated
London	59	36	23
Bristol	8	5	3
Leeds	5	2	3
Manchester	23	14	9
Newcastle	5	3	2
	100	60	40

The successful candidates, who have been registered as Students, are as follows, their names being given in order of merit as placed by the Examiners :—

BENNETT : Thomas Penbertley [*P.* 1910]; 46 Cambridge Avenue, Kilburn, N.W.
THOMAS : William Norman [*P.* 1909]; 236 Nantwich Road, Crewe.
NEWTON : William Godfrey [*P.* 1909]; 40 Ladbroke Square, W.
LORNE : Francis [*P.* 1906]; 44 Torrington Square, W.C.
HOFLER : Max Richard [*P.* 1909]; St. Catherine's Lane, Eastcote, Middlesex.
ROBERTSON : Manning Durdin [*P.* 1910]; 36 Bedford Square, W.C.
MACKENZIE : Kenneth Beaumont [*P.* 1908]; c/o Harry Redfern, Esq., 5 Bedford Row, W.C.
DUBINS : Louis Gabriel Alfred [*P.* 1910]; 28 High Street, Eccleston Square, S.W.
WOODROFFE : Norman Frederic [*P.* 1909]; Chesney Wold, Purley Downs, Surrey.
ROWNTREE : Colin [*P.* 1908]; 11 Hammersmith Terrace, W.
LAIT : Leonard Harry [*P.* 1909]; 44 Rylett Crescent, Ravenscourt Park, W.
EBBS : Edward Harold Montague [*P.* 1905]; 11 Greenhill Road, Harlesden, N.W.
HINTON : John Garfield [*P.* 1905]; 36 Upper High Street, Winchester.
WALTER : Robert Albert [*P.* 1904]; 46 Cavendish Road, Harringay, N.
ELGAR : William Henry; 48 Watkin Road, Folkestone.
FRISCOTT : Harris Stephens [*P.* 1909]; 42 Hill Park Crescent, Plymouth.
MOERDIJK : Gerard [*P.* 1911]; 10 Watford Villas, Battersea Park, S.W.
TAYLOR : Rowland Victor [*P.* 1908]; 25 Curzon Road, Southport.
WILLIAMSON : Fred [*P.* 1910]; "Lynton House," Rushford Avenue, Levenshulme, Manchester.
GOLD : Hugh Andrew [*P.* 1908]; Cosford, The Avenue, Beckenham, Kent.
HARLAND : Norman Gregory [*P.* 1909]; 85 Moundfield Road, Stamford Hill, N.
HILL : Claude Edgar [*P.* 1907]; 35 Collegiate Crescent, Sheffield.
CHEADLE : John Oscar [*P.* 1911]; 11 Campden House Road, Kensington, W.
HART : Edmund John [*P.* 1910]; 9 Bank Street, Salford, Manchester.
PIDSLEY : Wilfrid Gould [*P.* 1910]; Sand Rock House, Pinhoe, Devon.
RUDHALL : Percy William Graham [*P.* 1902]; 22 Belsize Park Gardens, N.W.
HEMM : Gordon [*P.* 1909]; Fenn Lea, 16 Manchester Road, Heaton Chapel, near Stockport.
ROBERTSON : Godfrey Alan Keith [*P.* 1907]; Ardnacoragh, Hughenden Avenue, Belfast.
CLARK : Charles James Kilgour [*P.* 1907]; 80 Brighton Grove, Newcastle-on-Tyne.
BOTHWELL : Edwin Forbes [*P.* 1908]; 211 Romford Road, Forest Gate, Essex.
BROADHEAD : Frank Arthur [*P.* 1909]; 31 Douglas Road, Nottingham.
CLARK : Sidney [*P.* 1906]; 3 Howard Place, Carlisle.
EDWARDS : Arthur Trystan [*P.* 1908]; 65 Huskisson Street, Falkner Square, Liverpool.
GARRETT : Sidney Colston [*P.* 1906]; 14 Windlesham Road, Brighton, Sussex.

GRICE : William Stanley [*P.* 1911]; Chapel House, Mattock Lane, Ealing, W.
HARWOOD : Arnold William [*P.* 1905]; 17 Pall Mall East, S.W.
JACKSON : Burrough de Carle [*P.* 1907]; Chelston, Overberry Avenue, Beckenham.
LEWIS : William John [*P.* 1903]; Dryslwyn, The Parade, Pontypridd.
MADDOCK : Richard Henry [*P.* 1908]; "Tremadoc," Egmont Road, Sutton, Surrey.
MATTHEWS : Ralph Edward [*P.* 1906]; "Elmcroft," Holyhead Road, Coventry.
McLEAN : George [*P.* 1909]; Bank Place, Portmadoc, North Wales.
MOUNTFORD : Edward Wallis [*P.* 1907]; The Hill, Guildown, Guildford.
NICHOLS : Charles Edwin [*P.* 1908]; Rectory Farm, Eckington, Sheffield.
NORRIS : Ernest Bower [*P.* 1907]; Rosemere, Clayton, Avenue, Didsbury.
PALMER : James [*P.* 1907]; 130 Balls Pond Road, Islington, N.
PARKIN : William Gordon [*P.* 1911]; 30 Carlingford Road, Hampstead, N.W.
RILEY : Richard Holden [*P.* 1905]; "The Sycamores," Lower Darwen, near Darwen.
SILCOCK : Arnold [*P.* 1909]; 26 Green Park, Bath.
SMITH : Thomas Harold [*P.* 1908]; 108 Davenport Street, Bolton, Lancs.
SUNTER : Michael Calvert [*P.* 1904]; "Klemlea," Holland Road, Chorlton-cum-Hardy, Manchester.
TOONE : Aubrey Alfred Gifford [*P.* 1906]; 228 Plymouth Grove, C.-on-M., Manchester.
WEST : Archibald John [*P.* 1909]; 150 Birkin Avenue, Nottingham.
WHITE : Percy Gordon [*P.* 1902]; Caerlaverock, Bickley Road, Bickley, Kent.
WIGGINS : Jack Stanley [*P.* 1907]; 3 Eaton Place, Brighton.
WILLIAMS : John Gerrard [*P.* 1909]; 103 Clifton Hill, St. John's Wood, N.W.
WILLIAMS : William John Vaughan [*P.* 1910]; Brookfield House, Llansamlet, Swansea.
WILSDON : Percy Thomas [*P.* 1907]; 36 Fanholme Road, West Kensington, S.W.
WINDER : Arthur Mayall [*P.* 1909]; 254 Waterloo Street, Oldham, Lancs.
WOODHOUSE : Brian William [*P.* 1905]; 15 Chatsworth Square, Carlisle.
YETTS : Lawrence Muskett, B.A. [*P.* 1911]; 45 Finsbury Pavement, E.C.

The following table shows the number of failures in each subject of the Intermediate Examination :—

I. Classic Architecture	18
II. Mediæval Architecture	27
III. Renaissance Architecture	34
IV. General Questions	20
V. Theoretical Construction	18
VI. Descriptive Geometry	20
VII. Applied Construction	17

Intermediate Exemptions.

The following candidates, having produced, in accordance with the regulations, satisfactory evidence of previous training, were exempted from sitting for the Intermediate Examination, and have been registered as Students R.I.B.A.—viz.

BARRY : Francis Renton, jun. [*P.* 1905]; "Inchgarth," Kew Road, Richmond, Surrey [Architectural Association School].
CARRERAS : Louis Ernest [*P.* 1908]; 48 Wellington Road, St. John's Wood, N.W. [Division of Architecture, King's College].
HUGHES : Vernon Hugh [*P.* 1907]; "Corunna," Sandgate, Kent [School of Architecture, Liverpool University].
OMAR : Ismail; 59 Parliament Hill, Hampstead, N.W. [School of Architecture, University College].
WEBB : Philip Edward [*P.* 1906]; 1 Hanover Terrace, Ladbroke Square, W. [Architectural Assoc. School].
WILLIAMS : Llewellyn Edwin; Ingram House, Stockwell, S.W. [Division of Architecture, King's College].

Final and Special.

The Final and Special Examinations qualifying for candidature as Associate R.I.B.A. were held in London from the 30th November to the 8th December. The Board of Architectural Education report to the Council that of the 99 candidates admitted and examined, 56 passed and the remaining 43 were relegated to their studies. The passed candidates, who, subject to Clause 8 of the Charter, have become qualified for candidature, are as follow, the * prefixed to a name indicating that the candidate sat for the Special Examination, which is designed for architects in practice and chief assistants exempted by the Council from the Preliminary and Intermediate Examinations and from submitting Testimonies of Study :—

ARCHER : Herbert Humbley [*S.* 1910]; The Cottage, 13 High Street, Windsor.
BAREFOOT : Herbert John Leslie [*S.* 1909]; 13 Wexford Road, Wandsworth Common, S.W.
BARGMAN : Robert Frederick [*S.* 1906]; 76 South Street, Dorking.
*BAXTER : James Alexander Manson [*Special*]; 7 Brougham Place, Edinburgh.
BENNETT : Thorold [*S.* 1907]; 36 Darnley Road, Gravesend.
BESANT : Hubert Saxton [*S.* 1908]; 75 Burnt Ash Road, Lee, Kent.
BRITTAN : Harold William [*S.* 1910]; 146 St. James' Road, Croydon.
*CASTELOW : Charlie [*Special*]; Forest Hill, Roundhay, Leeds.
CLARKE : John Moulding [*S.* 1909]; "Brentwood," Fulwood, Preston.
COWDELL : Charles Joseph Morton [*S.* 1908]; "Sunny side," Springfield Road, Leicester.
CROUCH : Frederick Alfred [*S.* 1910]; 75 Portland Road, Hove, Brighton.
*CULLEN : David Stearer [*Special*]; 47 Edith Road, South Norwood.
DOVASTON : John [*S.* 1905]; 14 Madeley Road, Ealing, W.
DOWDESWELL : Frank [*S.* 1908]; Trevone, Grovelands Road, Palmer's Green, N.
DUNN : Gerald Morton [*S.* 1904]; 1 and 2 Bucklersbury, Cheapside, E.C.
DURRANT : Arthur Michael [*S.* 1908]; Leverstock Green, Hemel Hempstead, Herts.
EDWARDS : Sidney James [*S.* 1910]; 3 Powis Square, Bayswater, W.
GROUND : John Kingston [*S.* 1907]; 13 Hart Street, Bloomsbury, W.C.
HEALING : John Burton [*S.* 1906]; 11 Abingdon Road, Leicester.

HEPWORTH : Philip Dalton [*S.* 1910]; "Cahirdown," Holford Road, Hampstead Heath, N.W.
JOHNSTON : Bruce [*S.* 1909]; 90 Windermere Road, South Ealing, W.
*KNEWSTUBB : Joseph John [*Special*]; Brackenbar, Graham Street, Penrith, Cumberland.
*LARSEN : Arthur Wilhelm [*Special Colonial*]; "Carleton," Hartington Road, Grove Park, W.
LAY : Cecil Howard [*S.* 1909]; 20 Willoughby Road, Hampstead, N.W.
LENTON : Frederick James [*S.* 1909]; 18 High Street, Stamford.
LING : Richard Bertram [*S.* 1905]; 119 West Side, Clapham Common, S.W.
*LOVELL : Richard Goulburn [*Special*]; St. Moritz, Upper Avenue, Eastbourne, Sussex.
MARTIN : Henry Ray [*S.* 1908]; 137 Burnt Ash Road, Lee, S.E.
MEIKLEHAM : David Lang [*S.* 1907]; "Osborne," Woodstock Avenue, Golders Green, N.W.
MORLEY : Francis Henry [*S.* 1907]; c/o B. W. Thorneley, Esq., Royal Liver Building, Liverpool.
MOSS : Harold Edward [*S.* 1911]; Rutland House, Kingston-on-Thames.
NICHOLSON : Frederick William [*S.* 1909]; 20 Preston Grove, Anfield, Liverpool.
*NICOL : Robert Dewar [*Special*]; P.O. Box 197, Calcutta, India.
ORDISH : Roland [*S.* 1908]; 1 Bailey Street, Derby.
OWEN : Geoffrey [*S.* 1908]; 20 Queen Square, W.C.
*OXLEY : Wilfred Benjamin [*Special*]; Education Department, Town Hall, Leicester.
PAGE : John [*S.* 1908]; Binham, Hadley Grove, Barnet, Herts.
PHILLIPS : Arthur Todd [*S.* 1910]; Llanoley, Harpenden, Herts.
ROBINSON : Harold Graham Fector [*S.* 1910]; 12 Lawn Road, Hampstead, N.W.
RUSSELL : Andrew Lawrence Noel [*S.* 1911]; 292 Lancaster Road, W.
SELWAY : Edward Ralph Douglas [*S.* 1909]; 38 Grafton Square, Clapham, S.W.
SHEARS : Reginald [*S.* 1909]; 38 Anerley Road, Westcliff-on-Sea, Essex.
SINCLAIR : William Braxton [*S.* 1904]; Lynton, Bexley, Kent.
SOUSTER : Charles Leslie [*S.* 1907]; 18 Eastdown Park, Lee, S.E.
STEDMAN : William Bernard [*S.* 1908]; 22 Bushey Road, Harlington, Middlesex.
*STEWART : Harry Sinclair [*Special*]; 6 Bloomsbury Square, W.C.
STOCKTON : Russell [*S.* 1906]; 43 Didsbury Road, Stockport.
*SWASH : Frank Stanley [*Special*]; The Mount, Llandrindod Wells, Wales.
VOYSEY : Charles, junr. [*S.* 1909]; 23 York Place, Baker Street, W.
*WELFORD : Arthur [*Special*]; 13 Hart Street, Bloomsbury Square, W.C.
WHITE : Charles Herbert [*S.* 1905]; 9 Shadwell Road, Bishopston, Bristol.
WHITEHEAD : Thomas Gustavus [*S.* 1909]; 10 Dunheved Road North, Croydon, S.W.
WHYMPER : William [*S.* 1908]; 10 Gray's Inn Square, W.C.
WILLCOCKS : Conrad Birdwood [*S.* 1907]; Willstead, Caversham Heights, Oxon.
WORTHINGTON : John Hubert [*S.* 1911]; Broomfield, Alderley Edge, Cheshire.
*WYLD : Robert Stodart Balgarnie [*Special*]; 31 Bedford Row, W.C.

The following table shows the number of failures in each subject of the Final and Special Examination :—

I. Design	31
II. The Principles of Architecture	24
III. Building Materials	11
IV. Principles of Hygiene	25
V. Specifications	18
VI. Construction—Foundations, etc.	31
VII. Construction—Iron and Steel, etc.	30

Ashpitel Prize, 1911.

The Board of Architectural Education recommend the Council to award the Ashpitel Prize for 1911 to Mr. Philip Dalton Hepworth [*P.* 1907, *S.* 1910] of "Cahirdown," Holford Road, Hampstead Heath, who passed the Final Examination above referred to, he being the candidate who has most highly distinguished himself in the Examinations held during the current year.

ALLIED SOCIETIES.

The Liverpool Architectural Society.—The Opening Address of the Session was delivered on 6th November by Mr. Arnold Thornely [*F.*], *President*, in the course of which he said :—

There is an undoubted tendency as our Secretaries could tell you) towards greater intercommunication between the Society and the Institute, and a desire on the part of the latter to call in the aid of the Allied Societies in much of its work. As instances of this may be mentioned the numerous meetings held in different parts of the country for the enrolment of Licentiates, and the assistance given by the Allied Societies in connection with the revised Regulations for Competitions. Quite recently our Council has been asked and has consented to undertake the examination of designs which may be submitted as an alternative to the usual testimonies of studies asked for in the Final Examination.* . . .

The revision of the Schedule of Professional Charges is now occupying the attention of the Institute. This subject has been under consideration for some time past, as it has been felt that not only might the Schedule of Charges itself be improved but that a clearer description of the architect's duties and responsibilities might with advantage be included to enable a client to realise exactly what he would get and what he would not get when employing an architect. A Special Committee of the Institute has gone exhaustively into this matter during the past twelve months, and the Council has recently forwarded their proposals to the Council of this and other Allied Societies with a request for their criticisms and suggestions. I trust that when issued by the R.I.B.A. in its final form it will be found by members to be an improvement upon the old basis. In my opinion it is most desirable that there should be no ambiguity as to the fees that an architect is entitled to charge for work of a minor character, and that such fees should be on a basis generally accepted by the public. The existing schedule is not at all clear on such matters, and as I think we are all agreed that five per cent. is, often enough, anything but adequate remuneration, a new schedule should put an end to any misunderstandings.

* See R.I.B.A. Kalendar 1911–12, p. 475.

Whilst on this question of fees it seems to me that the time is now ripe for the amount of commission chargeable for quantities to be put on a definite basis. I am afraid it is doubtful whether the Institute will see its way to embody these in their new schedule by reason of the fact that the quantities are not usually in London considered part and parcel of the architect's work. So many provincial architects are, however, responsible for their own that the question becomes a pressing one, and particularly so as I believe the Quantity Surveyors' Association have not so far seen their way to formulate a definite schedule.

I particularly refer to this because I see that various public bodies have recently advertised for quotations from surveyors, and evidently adopted the principle of accepting the lowest. This in one case amounted to one and a half per cent. on the cost of the projected work, and I believe offers of one-half per cent. have actually been received. If such a system is to become general a serious difficulty is at once presented. If the idea once gets abroad that reliable quantities can be obtained for the outlay I have mentioned, it will be only a short step for such a percentage to become the generally accepted rate, and quotations might even then be asked for on the chance of obtaining a still lower scale.

Mr. Thornely then called attention to the various legal decisions during the past year which have added so largely to the architect's responsibilities, singling out for special mention the dry-rot cases and the case of the *Crittall Manufacturing Co.* v. *London County Council*. As a result of the judgment in the latter case, he said, it becomes clear that when an architect nominates a specialist and requests the contractor to employ him, and he is declared by the conditions of contract to be employed by the contractor, he (the contractor) is at the same time merely an agent acting on behalf of the building owner; and further, should the contractor fail to pay to his sub-contractor any sums of money included in the architect's certificates for that purpose, the building owner is liable to have to pay a second time. I have the greatest sympathy with any sub-contractor who having done his work fails to get paid for it owing to the bankruptcy of the general contractor, but I cannot see that he should have preferential treatment over any other person from whom the contractor may have purchased goods. He enters into the contract knowing to whom he is to look for payment, and in doing so must be prepared to take the risk (if any) of not being paid, as other people have to. One or two different ways of dealing with the difficulty have been suggested: (1) To insert a clause in the contract providing that no sums of money due to specialists will be included in any certificate to the contractor until he has paid the specialists and produces receipted accounts in respect of same, and also providing that in the event of the contractor failing to pay the specialists within a certain time, the building owner shall have power to pay the specialists direct. (2) To arrange for all specialists to be paid direct by the building owner upon production of a certificate from the architect. This latter suggestion would do away to a large extent with the advantages derived from having a sole contractor who is responsible for the whole of the work, and would also give the building owner considerably more trouble than he would willingly undertake. The whole question of the sub-contractor's position in relation to the general building contract becomes in fact one of increasing difficulty, and particularly so now that the introduction of numerous specialists is such a usual feature in a building of any magnitude.

The cases I have mentioned are of such importance to architects, particularly those concerning dry rot, that I hope and trust the Institute will seriously take the matter in hand, and, if possible, provide some means of protection for its members. It is, I believe, pretty well agreed among those well qualified to speak that there is much more difficulty in obtaining sound and well-seasoned timber at the present time than used to be the case, and as a consequence dry rot has become more prevalent. Under these circumstances it seems to me to be only reasonable that architects who have exercised reasonable care and skill in the construction of their buildings should not be held responsible in the event of dry rot occurring in them. Various methods of overcoming the difficulty have been suggested, some of which are as follows:—(1) Architects to contract out of it when settling the terms of their appointment with their clients. This would be likely to cause such unnecessary alarm as to give their clients many sleepless nights. (2) For building owners to insure against it, the cost being provided for in the building contract for a period of, say, six years. (3) The building contract to provide for a maintenance period of six years. To this proposal the builder might take exception. But whatever the remedy, a remedy must be found.

Passing to subjects of local interest, Mr. Thornely said:—

For several weeks during last winter a great discussion raged over the propriety of erecting an equestrian statue as a memorial to King Edward VII. at the south end of St. George's Hall. The question was entirely concerned with the architectural fitness of the idea, and whether it were possible satisfactorily to erect a statue in that position. The local press opened its columns for the discussion of the subject, the architectural papers throughout the country had leading articles upon it, the Royal Institute of British Architects passed a resolution condemning the proposal, and this Society took its share in offering a strong protest. I think it may be said without fear of contradiction that the more the idea of tampering with the architectural composition of this end of St. George's Hall was discussed the more apparent it became that to do so would be fraught with the greatest danger. The architectural profession was almost unanimously opposed to the suggestion. Since that discussion ceased many months have elapsed, and so far as I am aware no information has been vouchsafed to the public as to what decision (if any) the Memorial Committee has come to. I can only express the hope that, taking into consideration the very large amount of criticism the scheme has provoked, the Committee will abandon it entirely and look for some other site in the City which will meet with more general approval. Many possible sites have been discussed and each one has had its supporters and objectors. To me, a site at the Pier Head appears to have unrivalled claims for such a monument—but before any definite position could be assigned to it, much thought should be expended in the preparation of a scheme for ultimately dealing with the whole of the Pier Head area of which the monument might form a part. It must be a matter of regret to all who have at heart the architectural amenities of the city, that when some years ago the Georges Dock site became ripe for development, town planning as now understood did not receive the attention it deserved. As a consequence,

the only question which then appears to have been considered was the width and direction of the streets forming the approach to the Pier Head across the Georges Dock. The occasion provided a favourable opportunity for laying down a scheme dealing with the treatment of the whole of the Pier Head area, including the landing stage approaches. Why should not a comprehensive scheme of this character be *now* taken in hand as a memorial to our late King? I believe that if the citizens of Liverpool fully realised the architectural possibilities and the vast improvement it would effect, there would be no great difficulty in obtaining the funds necessary for its execution.

Mr. Thornely referred to "The Art Commission of the City of New York," which was founded in the year 1901, and quoted Section 637 of its charter which enacts that:—"Hereafter no work of art shall become the property of the City of New York by purchase, gift, or otherwise, unless such work of art or a design of the same, together with the proposed location of such work of art, shall have first been submitted to and approved by the Commission; nor shall such work of art until approved be contracted for, erected, or placed in or upon any public building, or other public place belonging to the City. No existing work of art in the possession of the City shall be removed, re-located, or altered in any way without the similar approval of the Commission. The Commission shall act in a similar capacity with similar powers in respect of the designs of buildings, bridges, approaches, gates, fences, lamps, or other structures erected or to be erected upon land belonging to the City, and in respect to the lines, grades, and plotting of public ways and grounds, and in respect of arches, bridges, structures, and approaches which are the property of any corporation or private individual, and which shall extend over or upon any street or public place belonging to the City." What beneficial control such a commission might exercise over the development of a large city! I hope the day is not far distant when the citizens of Liverpool, awakening to a fuller appreciation of the beautiful, may realise the necessity of creating some such controlling authority.

Having given a brief account of the recent International Congress of Architects at Rome, which he had attended, Mr. Thornely continued: So far as I am concerned I have never viewed in so short a time such a glorious array of architectural masterpieces as I saw at Rome. . . . In the cursory examination one was able to make, what struck one most about all these buildings was their immense scale and largeness of conception, and the lavishness with which the interiors of the churches were decorated. To one accustomed to the sparing use of sculpture and painted decoration in our English Renaissance buildings such sumptuousness is at first sight overpowering, but it is surprising how soon one enters into the spirit of it, until at last one feels a sense of incompleteness in the internal finish of our English buildings. The facility with which the artists made use of the human figure both in painting and sculpture, adapting it in the most perfect manner to each and every position, cannot fail to strike any architect when making his first acquaintance with the masterpieces of the fifteenth and sixteenth centuries. . . . I have spoken of the costly marbles with which many of these churches are embellished, but in Italy, more than in any other country that I have visited, things are not always what they seem. It constantly happens that upon entering a church you are amazed at the richness of the marbles employed in its construction, only to find on making a closer inspection that this apparently beautiful material is nothing better than paint. The deception is so well executed that it is necessary actually to feel the surface before one can decide whether it is real or imitation. What is more, Italians seem to have no limit to their ability in this direction, and much of their architecture becomes closely allied to scene-painting. Even the rustications and quoins of many of their old palaces are nothing else than a backing of brickwork covered with stucco, but so cleverly done as to deceive any but the closest observer. Palladio himself was one of the greatest sinners in this respect, for most of the noble stone palaces at Vicenza are nothing but a backing of brickwork covered with an inch or so of stucco. All over Italy this feature is so prevalent that one begins to wonder whether *we* are not altogether too truthful, but perhaps we prefer the straight and narrow path for the simple reason that we cannot tell a lie without immediate conviction.

Until my recent visit to Rome I had formed the idea, without giving much consideration to it, that modern architecture in Italy was at a rather low ebb. I cannot say that I should have much reason for changing that opinion if it were not that I had seen, and examined with considerable interest, the magnificent monument to Victor Emmanuel II. which is now nearing completion. Built on the slope of a hill and forming one end to a large piazza it rises up tier after tier to a huge colonnade in front of a screen wall along the full extent of its width. Centrally placed is the colossal equestrian statue of Victor Emmanuel executed in gilded bronze. The general structure is of a brilliantly white Botticcino limestone, very like Carrara marble, which glistens in the sun and gives a wonderfully interesting effect of light and shade in varying lights. If I were to criticise it I might say it is almost on too large a scale, even for Rome, a city in which big things abound, but, be that as it may, the whole conception, so full of imagination, so cleverly conceived to meet the exigencies of the site, and so beautiful in all its detail and workmanship, cannot fail to compel one's admiration. What a contrast it forms to the Courts of Justice recently erected in Rome, a work of equal magnitude, but which, vulgar and coarse in all its proportions, lacks every quality that makes for fine architecture!

In conclusion let me give you a passage from Zola's *Rome*, which so aptly describes the spirit which has pervaded the city throughout the ages—alas that we should have not even the shadow of it here!—he says: "All of them possessed alike this passion for building, which seems to belong to the soil of their Empire, which reappeared in each of them with growing intensity, filling them with the desire to go farther, to surpass their predecessors with walls yet stronger and higher, with yet more marvellous piles of marble, more splendid columns and statues. And this thought was the same in all, of carrying forward their life, of leaving to the astonished generations that were to come the witness of their greatness, of perpetuating themselves in marvels which should never perish, but should still weigh upon the world with the force of Colossi, even when their own ashes had been scattered to the winds."

Leeds and Yorkshire Architectural Society.—A General Meeting of this Society was held on Thursday

evening, 14th December, at the Leeds Institute, the President, Mr. Sydney D. Kitson [*F.*] in the Chair. Mr. A. E. Dixon [*F.*], of Birmingham, read an interesting paper on the "Early Roman Churches" to a number of Members and Associates. The lecture dealt with the Early Christian Churches of between the third and ninth centuries, also mentioning the chapels, tombs, and catacombs. In dealing with the various features of these buildings the mosaics commanded special attention, being illustrated by a number of excellent slides, showing the decorations to the apses of many churches. A remarkable feature in the subjects of these mosaics is their peaceful seriousness, humour and scenes of judgment or retribution being entirely absent. In contrast to this, a number of slides were shown illustrating grotesque capitals from the neighbourhood of Poitiers, where in all cases grim humour was the predominating subject.

Glasgow Institute of Architects.—A quarterly general meeting of this Institute was held on the 13th December—Mr. John B. Wilson [*F.*], President, in the chair. The Secretary submitted a report on matters which had been dealt with by the Council since the last meeting. Representations had been made for amendment of the conditions of two competitions, and in one of these the Council had been successful in arranging for a fully qualified assessor being appointed. A proposal that a town planning exhibition be held in Glasgow had been received with satisfaction, and the Council hoped that arrangements would be made to hold such an exhibition in the city. It was reported that the Council had fully considered the amendments on the proposed new articles of association suggestep at the extraordinary general meeting of the Institute held recently, and an informal discussion took place on the alterations proposed by the Council. It was reported that the proposals would be brought before the Institute at an early date for approval. The Secretary reported that intimation had been received from the R.I.B.A. that it was absolutely necessary that all applications for election to the class of Licentiates should be in the hands of the Secretary of the Royal Institute by April 30, 1912, at latest.

MINUTES. IV.

At the Fourth General Meeting (Ordinary) of the Session 1911-12, held Monday, 18th December 1911, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 30 Fellows (including 13 members of the Council), 44 Associates (including 2 members of the Council), 13 Licentiates, and several visitors—the Minutes of the Meeting held 4th December 1911, having been printed in the JOURNAL, were taken as read and signed as correct.

Mr. E. Guy Dawber, *Vice-President*, in the absence of the Hon. Secretary, having announced the decease of James Rawson Carroll, of Dublin, elected Fellow 1876, resigned 1908; George Gordon Hoskins, of Darlington, elected Associate 1867, Fellow 1870; and Pierre Jérome Honoré Daumet, of Paris, Hon. Corr. Member elected 1886, Royal Gold Medallist 1908, it was resolved that the regrets of the Institute be entered on the Minutes of the Meeting and that messages of the Institute's sympathy and condolence for the loss they had sustained be conveyed to Madame Daumet and to the nearest relatives of the other deceased gentlemen.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President—viz. Robert Douglas Wells, *Fellow*; Charles Malcolm Swannell, Samuel Arthur Speare Yeo, Maurice Spencer Rowe Adams, *Associates*; and John Bruce Merson, Percy Walter Reed, William Harold Williams, and Joseph Vermont, *Licentiates*.

The Secretary having formally presented lists of the names of candidates who had passed the recent Preliminary, Intermediate, Final and Special Examinations, the Meeting agreed that the names should be taken as read, and the lists were laid upon the table for inspection after the Meeting.

The Secretary announced the names of candidates nominated for Membership—viz. as FELLOWS: Francis Winton Newman [*A.* 1904, Ashpitel Prizeman 1903, Arthur Cates Prizeman 1905] and Walter Tapper [*A.* 1889]; as HON. CORR. MEMBER, Victor Alexandre Frédéric Laloux, Membre de l'Institut de France, Commandeur de la Légion d'Honneur.

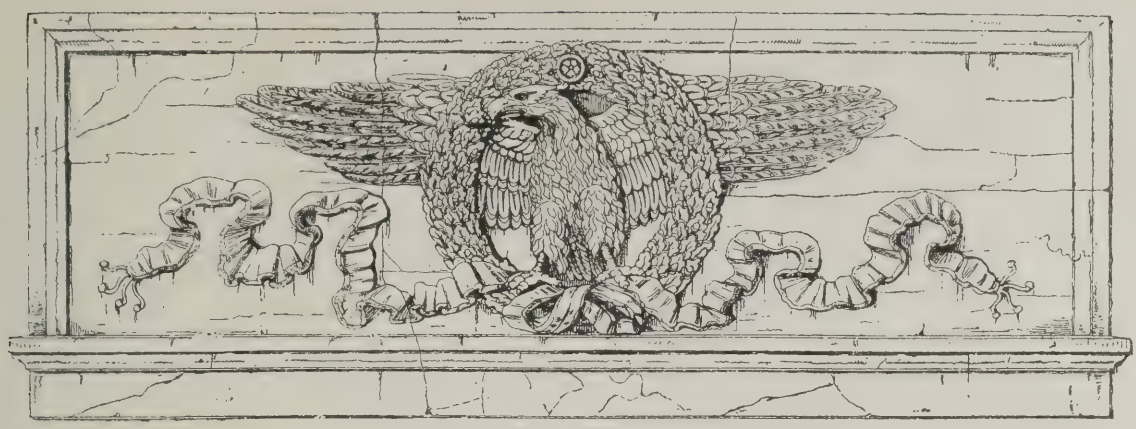
The Secretary further announced the nomination to Licentiateship of the 41 candidates whose names were published in the Supplement for 21st October—viz.: Peter Frederick Binnie; George Francis Blackburne-Daniell, Cairo; William Alfred De Laistre Broadley; Charles Henry Brooke, Leeds; Henry Troughton Candler; Frank Sizer Capon; Arthur Gerald Crimp; Norman Elliot, Trafalgar House, N.; Vincent J. Esch, Calcutta, India; Frank Leonard Hodgson Fleming, Johannesburg; Edgar George Fletcher, Stockton-on-Tees; Henry Ernest Flinn, Birkenhead; William Henry Ford, Frankfort, O.F.S., South Africa; Percy Norman Ginham; Charles Thomas Good, Adelaide, Australia; Samuel Grundy, Junr., Ulverston; George Alfred James Hart, Christchurch, New Zealand; William Hynam; Thomas Gordon Jackson; Thomas McCosh Johnson, Cardiff; Melville Charles Marion Leggett, Nairobi, British East Africa; Edward Meek, Wellington, New Zealand; George Reginald Oddy, Halifax; Ernest Hadden Parkes; Neville Bond Pearce, Alberta, Canada; William John Player; Alexander Robertson, Kalgoorlie, West Australia; Piefer Rodeck, Cairo; Arthur Arnold Sebley; Charles Evelyn Simmons; Cyril Hugh Slatter; Granville Edward Stewart Streatfeild; Henry Makins Tait, Kimberley; Joseph James Taylor, Darlington; William Thomas Topott, Leicester; Edward Arthur Verger, Winchester; Ernest John Wallis; Henry B. Watson, Vancouver, B.C.; David Webster, Saskatoon, Sask.; Sidney Wallace Whitmore, Pretoria, Transvaal; George Wittet, Bombay, India.

Papers, arranged for by the Practice Standing Committee, on the NEWER RESPONSIBILITIES OF ARCHITECTS, were read by Messrs. W. Henry White [*F.*] and Edward Greenop [*F.*], and the subject was discussed by Messrs. A. M. Brice and G. R. Blanco White, Barristers-at-law.

On the motion of the President the discussion was then adjourned, the President stating that the Papers read that evening would be printed in the JOURNAL, and that at the adjourned Meeting two other Papers which had been prepared by Messrs. Wm. Woodward [*F.*] and A. Saxon Snell [*F.*] would be read, and the discussion to follow would cover the ground of all four Papers.

The President announced that a Special General Meeting would be held, following the Business Meeting of the 8th January 1912, to discuss proposals of the utmost importance with respect to the Society of Architects, particulars of which were about to be sent to all members.

The proceedings closed and the Meeting separated at 9.55 p.m.



THE NEWER RESPONSIBILITIES OF ARCHITECTS.

By W. Henry White [*F.*] and Edward Greenop [*A.*].

Read before the Royal Institute of British Architects, Monday, 18th December 1911.

I.

By W. Henry White [*F.*].

WHEN the Council invited suggestions from the Practice Standing Committee for subjects of interest to a General Meeting of the Institute, the actual work of the Committee naturally suggested the title for this evening's discussion. The "business" side of our profession is of course the one with which the Practice Committee is chiefly concerned, and, in the several interests of clients, contractors, and architects, its importance must not be under-estimated nor its responsibilities shirked if these interests are to be safeguarded. It is to be feared that even the most beautiful design which could be conceived and carried into execution would only produce dissatisfaction, trouble, and sneers at architects if it resulted in financial loss and lengthy litigation; and if the loss were traceable to the unbusinesslike methods, or to speak more correctly want of method, on the part of the architect he would get more blame than praise, however good his architectural work might be. It is therefore the obvious duty of the Royal Institute of British Architects to put forward and foster a high ideal of those three qualifications of a good architect which a highly esteemed late President of the Royal Institute of British Architects so ably set forth in a Presidential Address delivered before its members, viz. that he should be:—

A man of Art;
A man of Science, and—
A man of Business.

The realisation of this ideal demands great ability and application, and is daily becoming more and more essential, owing to the ever-increasing demands made upon the architect's skill and business knowledge. Both students of architecture and architects in practice must keep in remembrance this necessary triple combination of qualities.

The keen competition which now obtains in all walks of life, and which almost amounts to setting a watch-dog to watch a watch-dog, has to a large extent ousted the older order of confidence in one's fellow men and has of late years resulted in a great increase in litigation over building cases. It is these cases, and the consideration of an increasing number of problems sent up to the Practice Committee for their solution and advice, which has brought home to them the need of considering the "Newer Responsibilities of Architects" and the

desirability of laying before the members of the Institute many points for their deliberation and, it is hoped, possible guidance.

There was a very heated discussion some years ago as to whether architecture was a profession or an Art, and much time was wasted thereon. What really matters to an architect is that his work shall be carried on with due and proper regard to the reason for which he is employed both as artist and man of business. If he has not been properly trained as an architect he cannot do justice to his work; and if he be so constituted that the business side of his profession is distasteful to him he must, in the interests of those by whom he is employed, at least see that he joins with or engages someone who can attend to it. If he does not, although he may carry out a great deal of work without its getting into the Law Courts, he is all the time sitting on the safety valve, and is incurring risks that in his client's, his own, and the builder's interests he has no business to incur. The Practice Committee are constantly being set problems on all manner of professional points which make it necessary to emphasise this in the strongest possible manner, as, if the inquirers had been trained to understand and appreciate their responsibilities, very few of these problems would arise. This is where the Institute can and ought to step in by keeping its members posted up to date upon the legal cases arising out of their work.

The Journal issued by the Institute and the professional papers give reports and articles from time to time upon building cases, and many architects no doubt read and study them, but only those who have occasion to be in the Law Courts at the hearing of such cases know how seldom the bare reports bring out the points which would be useful to the practising architect or how little they tell of the months of preparation work, anxiety, and cost to all concerned. It is only when one gets into the gloom of the Law Courts that one realises how really important are points which may have been regarded as immaterial but upon which the decisions of the Courts turn. As an instance, it was pointed out in a recent case that instructions to an architect by a client not to issue further certificates was not sufficient to justify him in withholding them, and that nothing but the dismissal of the architect would have been sufficient to have prevented him from continuing to act. Further, if he had been appointed arbitrator between the parties he could not have been prevented from issuing a certificate, nor could his decisions have been challenged except on the grounds of fraud, gross negligence, or improper conduct, when no doubt the Courts (quite properly) could give relief. Where the architect is a thoroughly trained and competent man this position of arbitrator would undoubtedly in most instances save both client and builder from vexatious law cases; and failing the architect being so appointed, it seems very desirable, in the joint interests involved, that the building contract should so provide for arbitration as to make it impossible to take a case upon it into the Law Courts until an award had been made. It must of course always be open to either party to try to upset an award, but the award should be a condition precedent to a law case, and it ought to be possible to frame a set of conditions under which such an arbitration should be conducted as would prevent the enormous expense which now usually obtains. If the Council of the Royal Institute of British Architects think such a scheme is desirable, the Practice Committee might be set the task of developing it. The legal profession might not be anxious to endorse such a scheme, but architects know how difficult it is to get their highly technical cases properly understood in the Law Courts, and the qualified technical arbitrator's award is more likely to settle the points of difference quicker, and with less cost, than the average law suit.

It has been stated by a lawyer, and it may be generally held by gentlemen of the legal profession as an article of faith, that "a lawyer's first duty is to his client," and architects would doubtless agree with this as a general principle; but if such an attitude prevents "equity" from obtaining, it is a hard and bitter statement and goes far to explain why the

older position of confidence in one's fellow beings has been driven away in favour of "Contracts" drawn with much and elaborate detail in the endeavour to prevent either party getting the "better" of the other.

In Mr. Kipling's lines, where the successful shipping contractor is explaining to his son the methods by which he acquired success in the words:—

> "And they asked me how I did it, and I gave 'em the scripture text,
> You keep your light so shining a little in front of the next,"

we have perhaps the key-note to the position, and it is this "keeping in front of the next" by trying to read so much more into a contract than either of the parties concerned is entitled to, which is so productive of law cases. However, the object of these notes is not to attempt to teach architects how to get the "best" of anybody, but to draw attention to the fact that they should be so educated as to be forearmed against the difficulties which beset them in their practice and be taught to bring logically trained minds to bear upon all their work, so that their decisions may be received with confidence by clients, builders, and others.

This question of training opens up another view of the situation, namely, that there is no definite professional course on the "business" side that young men can take up, and although professional practice is provided for in the Royal Institute of British Architects' examinations it is certainly not sufficiently exhaustive; the young practitioner is thrown upon his own resources on commencing practice, and unless he can gain his experience under a competent master he is likely to do so at the expense of his clients.

Another important consideration which has arisen of late years is the change in the methods of contractors in carrying on their business. There is an increasing number of contractors who sub-let their work, and, instead of having a practical and useful knowledge of building work as a craft and being able to assist the architect in carrying out difficult matters, now run their business from a counting house, and, having taken a contract, proceed to underwrite their liabilities by a sub-letting system which can only be described as a game of "heads I win, tails you lose." This system is no doubt to some extent forced upon them by the close competition to which they are subjected, the exacting rules of Trade Unionism, and the legal responsibilities thrown upon them by recent legislation—but the result to architects means detailed drawings, increased supervision, and correspondence to an extent unknown to the last generation; without details and careful instructions for the most simple kind of work the builder will be "waiting" and the work hung up—that is if the object be to produce the best results.

Again, modern buildings are so much more complex in the various parts and appointments, and so much "specialist's work" has to be accommodated and provided for, which all tends to increase the architect's work and responsibilities. Facts, however, must be faced, and architects must realise their responsibilities and train themselves to meet them in a business-like manner.

No doubt where a large architectural practice is concerned the ideal position would be to combine the artistic and business side by partnership, as the strain is in most cases too much for one—but we are not concerned with these exceptional cases—they can take care of themselves. Our point is rather to see that the average man is taught how to act in a reasonable and proper manner in connection with the various and often opposed interests which come into his daily practice.

With registration of architects in the air this becomes more and more necessary, as it will bring with it new responsibilities, and, in the first instance, many men will be enrolled because they have a vested interest which it would be unfair to override, but all of whom

may not have been members of any recognised Architectural Society or have qualifications which would satisfy the Royal Institute of British Architects. Unfortunately it is the unskilful men who keep back the profession in the estimation of the public. The best work often "goes through" without any praise or recognition, but the faults of the incompetent receive undue prominence and reflect, unfortunately, upon the profession as a whole.

The Copyright Act when it comes into force will also require the architect's careful consideration.

Another influence detrimental to an architect's work is the "hurry scurry" of modern times. No doubt many of the commonplace buildings put up with lightning-like rapidity, and much wear and tear on the part of the architect and others concerned, owe their faults to the lack of time which is allowed for their conception and development. This particularly applies to our street architecture, where, owing to the cost of the site and the expenses involved in waiting, the business man wants his work done at express speed, and it is usually ineffectual to say him nay unless you are prepared, as few can afford to do, to forego the work. We must hope that a wider knowledge of citizenship and a better appreciation of good architecture will in time compel a different state of things in this respect.

But does the policy of the Institute, in what amounts to withholding the architect's name from the public as far as possible, assist them to a knowledge that there are good, bad, and indifferent architects as shown by their works? True, a few prominent men obtain a certain amount of recognition when some big building is "written up" in an evening paper, but to the man in the street who daily passes all sorts of buildings upon which he can learn the not appear under all sorts of pains and penalties, there is no means of ascertaining the name of the builder and numerous sub-contractors, but where the name of the architect must architect's name or anything about him. In all probability a large majority of the public think the *builder* is responsible for the design! This is rank heresy no doubt, but if the Institute wishes to foster in the public an interest in architecture let it insist upon the architect's name being indicated and regulate how and what notices as to builders etc. be shown for the information of the public, and in this manner help to interest and educate them. It is certain that most work is placed in the hands of architects by influence rather than by knowledge on the part of the public.

Another of the architect's difficulties is caused by the client changing his mind as the work proceeds consequent upon not understanding the drawings, and such changes often result in increased cost. This should be carefully explained to the client, and in fact he should be informed from time to time during the progress of the works as to the approximate amount of variations. The omission of this precaution followed by the presentation of a big bill of extras at the completion of the work is a frequent source of trouble, and probably results in the loss of a client who, had he been treated in a business-like manner as the work proceeded, would have been perfectly satisfied.

Changes from the drawings and specification take place in almost every contract, and herein lies the danger of the "lump sum" contract and the advisability of making the quantities a part of the contract; indeed, it would seem to be the only fair and reasonable method and would obviate some of the difficulties which arise under the head of variations. As regards the varying of materials or allowing a different brand from that specified to be used, great care must be exercised in doing this and advising the client thereon. The average specification that is brought before the Law Courts wants much revision to bring it up to the standard of modern requirements and limitations. Could not the Royal Institute of British Architects in the interest of its members suggest clauses as to the proper specifying of timber, a standard for concrete for floors, asphalte, paint, etc.—clauses which could be accepted by

the profession and which would prevent so much of the conflicting evidence that is now given in the average building "case"?

The answer might be made that these are matters for text-books and experience; but as regards the former they are certainly not written from the legal point of view; and as to the latter, let the benefit of the experience at the command of the Institute be placed before its members in a practical manner—let the Practice and Science Committees act hand in hand and the benefit of their work be given in concise form for the guidance of all members of the Institute. In this manner the profession would be "speeded up" to a higher standard and less friction would result upon points which are now considered a matter of opinion, the effect being that in most cases three or four architects are to be found on opposite sides and with diametrically opposed views, a fact which has earned for the professional expert the opprobrious title of liar in the third degree.

It is not here suggested that all the difficulties that may present themselves in an architect's practice can be solved by the means suggested or that cases of gross negligence should be condoned, but it must be patent to all who have given any thought to the matter that architects are very much divided against themselves, and the way they appear before the public in our law cases does not always tend to increase confidence in their abilities. In what other profession can we see the same lack of *esprit de corps*? and what help does the Institute give its members who are forced to fight an uphill fight even when their losing or winning means so much to the profession?

True the Institute has a Professional Defence Committee, but it appears to be an arsenal without ammunition and therefore its powers are limited. It ought to be possible to create a fund which would enable the Institute to give something more than moral support to a professional brother who was made to fight such a case as *Lanning* v. *Davey and Salter*. (Mr. Greenop will cite this case in his Paper.)

There have been numerous law cases of late years which have considerably upset the generally conceived views of the architect's duties to client and builder, with the result that thousands of pounds have been spent in the Law Courts which might and ought to have been saved. Two recent cases over building matters occupied some forty days and thirty-eight days respectively in the hearing—in one case over £1,250 was spent in transcribing the shorthand notes alone! Just imagine what the total expenses must have amounted to!

Instances could easily be multiplied to show how unprofitable to owner, architect, and builder these cases are, and they appear to be on the increase, in consequence, it is contended, of the new order of things, which involves so much more knowledge on the "business side" by the architect, the close competition to which clients themselves are subjected, which sometimes (and not unnaturally) makes them hard and exacting on others, the keen competition amongst contractors, and the hard and fast interpretation of contracts by the legal profession and judges.

It does not seem to have been generally realised amongst members of the profession that the architect's position in relation to his client is a most invidious one as regards liability. The builder after the usual twelve months' maintenance clause has expired is freed from all further responsibility towards the client, but the architect remains liable up to the period allowed by the Statute of Limitations, *i.e.* six years. This is a ridiculous position. The builder receives payment for doing his work properly, and so far as can be reasonably expected the architect has supervised and certified it as satisfactory. But some piece of scamping develops its faults, two, three, or five years afterwards; the builder has been freed—but the architect is *still liable*. This must be remedied, it is too unjust a burden for the architect to remain under. We cannot imagine that any responsible contractor would object to such alterations in the terms of contract as would give the relief necessary.

No architect can "live upon his job," and it is a sheer impossibility for him to know every detail of work that has been put into a building. He is compelled to accept the lowest tender, often from builders of the client's selection, and however conscientious and careful he may be it is obvious he cannot, without staying upon the work during the whole time it is being carried on, be sure that every part has been done properly. With large works and competent clerks of works and good contractors he may accept his liability with equanimity, but with the average work carried out under his directions and without a clerk of works—for whose services the client does not think he should be called upon to pay—he should have a clear and definite understanding with his client on the subject of supervision, and the builder should remain responsible for any defective work the faults of which only develop after the ordinary period of maintenance has elapsed.

The architect is sometimes blamed for being too conservative as to the acceptance of new materials and methods of construction, but if he does try experiments in this direction (which of course he would not do without careful inquiry and consideration), he should, when recommending their adoption to his client, see that he does not get saddled with the responsibility of their failure in any unreasonable way, but having provided for guarantees as to such work or materials or methods of construction he should see that the client is satisfied to accept them. Now it must be clearly understood that the Practice Committee do not wish—and no architect worthy to be so called wishes—to relieve any member of the profession from responsibilities which a well-trained man should be able to assume, or that they would countenance cases of gross negligence, or grave irregularities, or shelter themselves under some unfair form of contract; but it will be seen from the typical cases to be presently discussed that the architect does most sadly need protection from the present state of affairs.

In order to set forth some of the difficulties which have arisen in recent years and which have been productive of costly litigation, let us assume that:—A client appears and instructs an architect in general terms as to the building he requires (the artistic skill of the architect selected is acknowledged); the client knows what his business requires in the way of accommodation, or the number and sizes of the rooms he wants in his house and what he wishes to spend, and after negotiations, sketch plans, working drawings, specification, contracts, etc., have been prepared the building is commenced and eventually completed satisfactorily to all concerned—*if*—the client is a reasonable man—the architect understands his art, profession, and business, and the builder has duly carried out his work in accordance with the "true intent and meaning of the contract." But much virtue lies in that *IF*! Let it, however, be here stated that it speaks well for the credit of the architectural profession, the reasonableness of clients, and the integrity of contractors that the great majority of work throughout the length and breadth of the land has been so carried on and completed, and if architects will take heed of the points which have called forth these suggestions they will at any rate be forewarned against some of the dangers which have been discovered in recent law cases.

But assume the case of an unreasonable or dissatisfied client or builder who determines to try for his "rights," as he regards them, in the Law Courts. Cases will be quoted later showing that such actions may be brought on some of the following grounds, or others which the ingenuity of the lawyer's mind can suggest, viz.:—

Variations from the contract and additions or extras ordered without the consent of the client.

The materials not of the particular kind specified.

The work upon being opened up found to be defective.

Water-pipes furred up in an undue space of time.

The contract not completed in time.

Goods ordered under provisional sums by the architect and not paid for by the contractor,

although included in a certificate met by the client, who has had to pay twice over owing to the failure of the contractor. Here the architect's position as agent for the client comes into question, showing the importance of the architect insisting upon the sub-contractors' receipt before including for the amount of same in the contractors' certificate. Further, unless clearly ordered as *Agent* for the client, the architect may himself become liable.

The client declining to pay the architect's fees, and the value and interpretation of the Royal Institute of British Architects' Schedule of Charges.

Payment disputed for work designed and not carried out.

The client claiming the drawings from which his building was erected. There is hardship and danger under this heading which can be avoided by the architect making proper arrangements with his client.

The architect's liability for "negligence" in such matters as "dry rot," insufficiency of work and materials, specifying one material and allowing another kind to be used without the client's consent.

Quantities forming part of the contract, or lump sum contract.

The arbitration clause.

Withholding or granting certificates from the client's and the builders' points of view.

The question of sub-contractors and the employment of specialists.

The client's responsibility for injury to workmen if the contractor is unable to pay and not covered by insurance.

Law cases bearing upon some of these points will be cited in the next Paper by Mr. Edward Greenop, who has given much time to the matter.

Without divulging secrets it may be permissible to state here that the Practice Committee have been working for some time past upon the revision of the Royal Institute of British Architects' Conditions of Building Contracts and the Institute's Schedule of Professional Charges. Their labours have been devoted towards the improvement of these documents in the interest of all concerned, and it is hoped they will very shortly be put before a Business Meeting of the Institute for approval and adoption. They represent long and arduous labour on the part of the Committee.

The points brought forward in this Paper as requiring the architect's business knowledge, emphasised as you will find them in Mr. Greenop's summary of cases, will enable you to criticise and appreciate the changes suggested by the Committee in these documents, and it is hoped that the Council will send to every member of the Institute a specially marked copy of the JOURNAL, drawing attention to the subject and giving the cases quoted and a summary of the reasons for the alterations, together with suggestions for their use in practice.

II.

By EDWARD GREENOP [*A.*].

THE reader of the Paper to which you have just listened having brought to your notice generally the position in which we now find ourselves, there has devolved upon me the task of emphasising his deductions by describing in detail the circumstances under which that position has been brought about. Even thus the ground we can cover in the time at our disposal in a subject of such importance is necessarily very limited. I trust, however, that the matter I am about to bring to your notice may justify the time I shall occupy.

Before proceeding to do this I wish to offer an advance apology for any apparent unwarranted intrusion into the domains of a learned profession other than our own, especially since there is no lack of learned legal experts upon the subject by whom we have from time to time been favoured, through various channels, with the results of their study and experience. Amongst others to whom we are so indebted, I may perhaps be permitted to mention Mr. A. A. Hudson, Mr. J. A. Strahan, Dr. St. John Morrow, and Mr. A. M. Brice. To the last-named we have been recently indebted for no less than three most instructive papers read before the Architectural Association, the Society of Architects, and the Institute of Builders.

This said, however, I may perhaps be excused for venturing the opinion that the architect has a pardonable claim to be permitted to view his responsibilities from a different station-point from that of the lawyer, giving a necessarily broader aspect than, if I may say so without disrespect, the training of the legal mind allows. Indeed, I will go so far as to suggest that he may fairly be credited with holding as it were an intermediate position between the lawyer and what is understood in the common use of the term "layman." The nature of our profession necessarily keeps us, in its ordinary practice, in close touch with that of the law, and, moreover, we stand, by reason of the complex and ever-changing detail of our vocation, in a position of extreme vulnerability to the law's assaults. The thought invites the suggestion that a good architect must be half a lawyer, and I venture to add that if lawyers could at the same time be half architects our task this evening would have been but light.

In bringing to your notice the following matter, I have endeavoured, as far as is possible, to eliminate names, although I must of necessity give the titles of the cases. In many instances the architects concerned will be met, I think, with our sympathy rather than blame; their sins are usually those of omission rather than commission, entitling them, at least morally, to a distinction in their favour. Again, they are, after all, pioneers for the benefit of others, since we profit by the knowledge derived from their misfortunes. Moreover, we should temper our judgments with the reflection that the critic of to-day may be the victim of to-morrow.

Time will not permit of reference to other than leading cases of quite recent date, and to these, therefore, I purpose confining myself except where any special point calling for notice may be involved.

Alleged Negligence.

Speaking generally, allegations of negligence may be considered as the most promising card to play when it is desired, from any cause, to avoid payment of an architect's fees; in fact, they may be looked upon as approximating in value to the ace of trumps. Strictly speaking, therefore, nearly all the cases I shall offer for your consideration should come under this heading. As a matter of convenience, however, the cases have been grouped under the several heads mentioned by Mr. White.

Findlay v. *Roques and Carvell.*

This was an action tried in 1907 before the Lord Chief Justice and a Special Jury for the recovery of architects' fees. The amount of the account was not disputed, but the client, a lady, set up a counter-claim for damages for negligence on the ground that she was wrongly advised as to the financial possibilities and risks attending her venture. Two small country houses were erected as a speculation. It was alleged by the client that she was advised to enter into the scheme by the assurance of the architects that there was a demand in the locality for such property, that she could build the houses for a certain sum and sell them to considerable advantage. In the result the cost of erection considerably exceeded the alleged estimate, and the sale price was much below expectations.

The evidence was very conflicting, and the reports point to most of the negotiations having been of a verbal character. The jury, notwithstanding, found in favour of the client for a considerable sum. The case, of course, points to the danger of the architect associating himself with the investment aspect in such matters, unless specially instructed to do so, in which case he should make the position very clear in writing.

Keyser v. *Trask and Sons and Webb.*

This action, fought in 1907, was for negligence against both architect and builder as co-defendants, and came before Mr. Justice Darling and a Special Jury. The building was a chapel, the walls of which were decorated by a mural artist. According to the evidence the rendering upon which the mural decoration was to be executed was originally intended to be done in cement, but lime plaster was afterwards substituted for economy. The walls were of flintwork and stone externally backed with brickwork. The artist expressed the opinion that it would be safe for him to paint on the walls two years after plastering, and accordingly this period was allowed to intervene. Four and a half years after the paintings were finished the paint began to peel off owing to damp. Another architect was thereupon called in, and on examining the walls reported the interior to be in places packed with rubbish of the character which usually accumulates during a building job. It was contended by counsel for the architect that to have prevented the isolated instances of irregularities discovered practically continuous supervision of the architect would have been necessary, and the report of the evidence suggests strong doubt as to whether the packing of rubbish was the real cause of the damp from which the decorations had suffered. The jury, however, found against both architect and builder.

The lesson to be learnt from this case appears to be that some definite understanding should be insisted upon with the client at the outset as to the extent and character of the supervision to be given.

Raikes v. *Power* and *Power* v. *King.*

This case was tried before Mr. Justice Darling and a Special Jury in June 1910. The client resisted payment of a sum due to the builder in respect of the erection of a picture gallery on the ground that, owing to dampness, certain valuable pictures hung upon the walls were damaged. The client at the same time brought an action against the architect alleging that the dampness was caused by his omission to provide a proper air draught for drying and keeping dry the walls. The two actions were tried together. There was the usual conflict of evidence, and the jury found that the builder, since he had duly carried out the architect's instructions, was not guilty of negligence, whilst the architect was guilty to the extent of £45.

Lanning v. *Davey and Salter.*

This was an action against architects for negligence, the first stage of which was before Mr. Justice Darling and a Special Jury in the King's Bench in 1906.

The client, a solicitor, after having paid upon several interim certificates issued by the architects, revoked their authority to further certify; the architects, however, continued to issue certificates. The client refused to honour them, and the builder sued upon them. The client alleged, as his defence to the builder's action, that there was bad work. The builder answered that upon this point the architect's certificate was final. Upon the case coming into Court the client's defence proved to be valueless, and he was compelled to settle the action in Court. He thereupon brought an action against the architects for the recovery of a sum of £600 damages and costs which he alleged he had incurred in consequence of the architects having acted improperly in inducing him to enter into a building contract in

which they had made themselves sole arbitrators against him, without his expressed or implied authority to do so. The architects contended that the building agreement was prepared in the client's interest, and put forward in the ordinary course of their duty as architects. Notwithstanding a strong direction by the Judge pointing in the architects' favour, the jury found against them to the extent of £750.

The architects appealed, and the appeal was heard by the Master of the Rolls with Lords Justices Cozens Hardy and Fletcher Moulton. Mr. Justice Darling reported to the Appeal Court that in his opinion the verdict of the jury was wrong.

The Court of Appeal were strongly in favour of the architects upon the merits of the case, and the Master of the Rolls said he would have liked to enter judgment for them at once, but that he did not think he could withdraw the case from a jury, and that consequently there must be a new trial. The case was thereupon retried before Mr. Justice Lawrence and a Special Jury, with the result that a verdict was given for the architects upon the question of negligence, and also upon their counter-claim for fees, a miserable £87 odd.

In commenting upon this deplorable case it is difficult to restrain oneself within the bounds of dignity. Here we have a client, who has been paying without demur for months upon the certificates of architects he has himself selected and imposed upon the builder, and who has contracted with the builder to pay upon those certificates, suddenly refusing to honour them without a shadow of justification, as is shown by his withdrawal in Court, and also by the observations of the Judges of Appeal, and then actually suing the architects for the sum so expended in costs. It is scarcely credible that, in face of the Judges' strong direction, he should be awarded by a jury not only the £600 claimed, but a further £150, apparently as "moral and intellectual damages."

Upon the case going to the Court of Appeal the Judges are unanimously in favour of the architects, but owing to some technicality which I personally am not able to appreciate, find it impossible to give judgment, with the result that all the proceedings have to be gone over again, at the end of which the architects' conduct is justified from the first. The evil appears to lie in the rottenness of a system by which the law allows such cases to be tried by such an incompetent tribunal as a jury. *Lanning* v. *Davey and Salter* will, to my mind, go down as an unanswered denial of the boasted protection afforded by the laws of this country.

David Lewis Trust and Levy v. *Graham.*

A case tried at the Manchester Assizes. Two years after completion a boarded floor was found to be affected by dry rot, and a sum of £295 had to be expended in relaying it. The clients alleged that the architect had not provided sufficient ventilation. It appeared that ventilating gratings were provided in the walls for the boarded floors, but that, as the corridor floors were of solid concrete and granolithic brought to the same levels and without ducts through them, the boarded floors were thus divided up into separate compartments having no inter-communicating ventilation. The action sought to recover the cost of relaying from the architect. Before the client's case was concluded the parties came to a settlement, the architect agreeing to pay a certain sum, all allegations being withdrawn.

This case turns again upon the vexed question of the amount of supervision fairly to be expected from the architect, in which connection it may be noted that the work was at Manchester, and that a London architect was engaged.

Leicester Board of Guardians v. *Trollope.*

Tried before Mr. Justice Channell, 23rd January 1911. An infirmary was completed in 1906, and a final certificate given by the architect. In 1908, two years after, it was

discovered that the floors were affected with rot, and £2,000 to £3,000 had to be expended in taking them up and relaying. The contract provided for 6 inches of concrete, then 2 inches of fine concrete, and wooden joists on top. It was found that wooden pegs had been driven into the ground upon which the wooden joists were laid, the space beneath being then filled in with concrete, leaving the pegs in. These pegs, it was found, had sucked up moisture from the earth, and so caused the joists and flooring to rot. A clerk of works had been employed, but it was contended by the clients that his duties were defined, in writing, as merely those of an inspector and assistant to the architect. The architect admitted that he had not seen the floor during construction, but that he had trusted to the clerk of works.

Mr. Justice Channell, whilst expressing his regret, gave judgment against the architect, who, he thought, was not greatly in fault, but at the same time he expressed the opinion that the laying of the floor was not a detail which could justifiably be left to the clerk of works.

It is interesting to note that the Judge expressed the opinion that the clients were in error in supposing that, as two years had elapsed since the date of the final certificate, they were debarred from proceeding against the builder.

With reference to this case, it should be added that the architect at the conclusion of the case communicated with the public Press, stating that the builders had always been anxious to be joined with him in defending the case, and that they were personally no parties to the deviation from the contract, which, as a fact, represented a merely insignificant saving. It also appeared that the builders, before the case was tried, offered to submit the matter to the President of this Institute, and to do anything he should order. They finally met the architect fairly in contributing towards the damages and costs. It is, therefore, pleasant to record that the attitude of both architect and builder in meeting the case was such as reflects credit upon them.

The Architect as Arbitrator or Agent.

So much has been written and said upon this, the most complicated and serious of all the difficulties we have to contend against, that I must confine myself to the two cases which appear to me to bring the law up to date.

Robins v. *Goddard.*

Tried in the first instance in the Chancery Division before Mr. Justice Farwell, June 1904. The action was against the client, a solicitor, by the builder for £2,830, balance of an account, for which sum the architect had given a certificate. Before the issue of the previous two certificates the client instructed the architect that he was "no longer to regard himself as entitled to issue certificates." The architect, however, continued to issue them.

The defence against the builder's action was that the certificates he produced were not duly, or properly, issued by the architect. There was also a counter-claim for damages and delay in execution and failure to complete the work. The client also claimed to set off sums he had expended in rectifying defects. This defence, Mr. Justice Farwell held, resolved itself simply into a counter-claim for defective work, and, seeing that by Clause 17 of the Institute Form of Contract, which was employed, the architect was sole judge as to this, and that the client did not produce any decision of the architect under this clause to support his allegation of defective work, the counter-claim and defence came to nothing. Judgment was, therefore, given for the builder. The Judge also expressed the opinion that the matters raised by the counter-claim did not come under the arbitration clause, Section 32, a most important pronouncement from the architect's point of view.

The case was taken to the Court of Appeal in December 1904, and the Court decided that

the architect's decision was not conclusive under Section 17 against the client, and judgment was accordingly entered for him. In delivering judgment to this effect, Lord Justice Mathew expressed the opinion that under the present Institute Form of Contract every dispute, whether arising during the progress of the work or afterwards, was referable to arbitration under Clause 32, differing in that respect from the previous form issued by the Institute. To use his lordship's words, "Language cannot be plainer or more comprehensive than that of Clause 32.'

The client, having thus succeeded in the Court of Appeal, brought an action against the architect for the whole of the costs he had incurred in fighting the action in the Divisional Court and Court of Appeal. This was heard by the Official Referee, who found against the architect, with very disastrous consequences for him. Unfortunately the proceedings before the Official Referee were not publicly reported, and consequently we are not in possession of the full particulars necessary to form an absolutely reliable opinion as to how far there was any justification for the allegations of negligence against the architect. The main point at issue, however, was: Was the architect an *arbitrator* between the client and the builder, or was he merely the *agent* or mouthpiece of the client? As, if an arbitrator, he would have been immune from attack by the client, it follows that the judgment of the Court of Appeal left him merely the client's *agent*. Up to this time the position of the architect in certifying had been clearly established by the cases of *Restell* v. *Nye* and *Chambers* v. *Goldthorpe*, tried in 1901, the latter in the Court of Appeal, in both of which it was decided that the architect, being an arbitrator under the contract, was immune from liability for negligence in certifying, so that, at one blow, the decision in *Goddard* v. *Ferguson* cut the ground from under our feet, and left us in the gravest peril. So much was this appreciated by the Practice Committee at the time that some two years were spent by them in endeavouring to get such an alteration made in the existing Institute Form of Contract as would restore us to the position of quasi-arbitrators, which, in our opinion, we had originally enjoyed, and upon their recommendation the Council with this object obtained the assent of the Institute of Builders to a verbal alteration of Clause 30. The latter part of that clause previously read as follows: "No certificate of the architect shall be considered conclusive evidence as to the sufficiency of any work or materials to which it relates, nor shall it relieve the contractor from his liability to make good all defects as provided by this agreement." This wording, which was obviously framed as a hold upon the builder only, was held by the Court of Appeal to permit the client to dispute the architect's decision on every point in the contract, including, of course, the issuing of certificates. Mr. Justice Farwell in the Court below read the words "nor shall it" as though they had been "so as to" in order to arrive at his decision in the builder's favour, and suggested the substitution of these words in future. This was the alteration, therefore, made by the Institute, and you will find it in the present form issued. It was thought that by so doing the clause no longer covered the architect as well as the builder. As to how far we are justified in this assumption I think is very doubtful. To my mind it carries us but a little way along that road whilst Clause 32 stands as it does. Happily, however, there was decided in May last a case which makes it no longer a matter of any moment. This was the case of *C. R. Roberts and Co.* v. *Hickman and Co.*, the importance of which to architects it would be difficult to over-estimate.

It was an action by a builder for balance of an account, and, in the first instance, was tried in the King's Bench Division. The client's defence was that under the contract payment was only to be made upon the architect's certificate, and that, as the builder did not produce this, or show that the certificate was being withheld by fraud or collusion between the architect and client, he could not maintain the action. This defence is of course so well established in law, and I hope so familiar to us all, that I need not quote the authority for it,

and as the builder did not satisfy the Court that there had been such collusion or fraud, judgment was given for the client.

The builder appealed, and the Appeal Court held that, on the evidence, there *had been* fraudulent collusion between the client and architect, by which the architect was incapacitated from giving a valid certificate. They, therefore, gave judgment for the builder.

The client took the case to the House of Lords, where it had the benefit of a very powerful tribunal consisting of the Lord Chancellor, Lord Alverstone, Lord Ashbourne, Lord Shaw, and Lord Atkinson. A unanimous judgment in favour of the builder was given with costs, but its extreme value to us architects lies in the very strong and emphatic views their Lordships expressed upon the architect's duties as between the client and the builder under a building contract. This cannot be better illustrated than by quoting briefly a few extracts from their judgments :—

The Lord Chancellor said :—"The architect mistook his position. He had not the firmness to recognise that his true position was that of an arbitrator, and to repel unworthy communications made to him by the client. Surely," he added, "it is serious misconduct on the part of an architect to receive instructions from one of the parties, and to act in that party's interests. It is an act which goes to the status of an architect. It makes him incapacitated to act as judge, and any such incapacity affects his decisions at every point." Again, he refers to "the mistaken view he had taken of his being required to procure the assent of the defendants before he discharged his duties under the contract."

The Lord Chief Justice said :—"It is very important that it should be clearly understood that when an architect is appointed by both sides to act as arbitrator between the building owner and the contractor for the work, the architect must maintain a strictly judicial position."

Lord Atkinson said :—"The architect has forfeited his independence as an arbitrator, and has allowed himself to be under the control of the building owner as to the granting of certificates."

Lord Shaw said :—"The position of an architect under a building contract is one of great delicacy, and the Courts have held that he must act strictly in accordance with his judicial capacity. He must maintain entire independence and impartiality." He added that he thought the architect had not acted in accordance with that standard. In support of this the learned Judge said he need only quote one letter which had been written by the architect to the builder. It was as follows :—"In reply to yours of the 22nd, had you not better call and see my clients, because in face of their instructions to me I cannot issue a certificate, whatever may be my own private opinion in the matter?" If my lay mind reads this case aright it is an entire reversal of *Goddard* v. *Robins*, and re-establishes us, probably for all time, in the position we should undoubtedly occupy under a building contract—namely, that of arbitrator, immune, in the absence, of course, of fraud or misconduct, from attack by either client or builder.

Carmichael v. *The Stonewood Patent Fireproof Flooring Co.*

This action was tried before Mr. Justice Bucknill in March last, and was of importance as bearing upon an architect's duties and the manner in which they should be exercised towards a sub-contractor. A sub-contractor entered into an agreement with the builder by which he was to lay a patent floor and guarantee it for three years. It was also agreed that, should the floor fail from any cause which the architect should decide was within the sub-contractor's control, the sub-contractor should return the price paid to the contractor. The floor proved unsatisfactory, and the architect decided the defects were such as might have been prevented by the sub-contractor.

The sub-contractor, however, refused to return the money, contending (1) that the architect's decision was not an award, he not having the status of an arbitrator, and (2) that the agreement the builder had made with the sub-contractor as to the architect's approval was not a valid submission to arbitration under the Arbitration Act of 1889.

Mr. Justice Bucknill decided in favour of the sub-contractor. In his judgment he said it was difficult to say whether the agreement was a submission to arbitration or not, but it was clear that, under the agreement, the architect had to decide whether the defects were or were not beyond the sub-contractor's control. He, therefore, thought it *was* a good submission. But being a submission to arbitration it was incumbent on the architect to hold a proper inquiry, hear evidence, and make an award as provided by the Arbitration Act. As he had not done so the architect's decision was invalid, and judgment was given for the sub-contractor.

The case was taken to the Court of Appeal, where it came before Lords Justices Vaughan Williams, Fletcher Moulton, and Farwell.

Lords Justices Fletcher Moulton and Farwell held that the agreement or guarantee, being only signed by one party, could not possibly be a submission to arbitration. No question of arbitration, therefore, arose in the matter, and the architect's procedure was quite correct. Lord Justice Vaughan Williams dissenting agreed with the Judge below, and stated that in his view the architect was quite wrong in his procedure.

Agent or Principal.

Crittall Manufacturing Co. v. *L.C.C.*

This was an action by a sub-contractor to recover against the clients failing payment by the builder. Iron sashes were supplied to a school. A clause in the contract entitled the clients to retain the cost of the goods from the builder until he had paid the sub-contractor, but this right was not exercised, the amount being included in a certificate to the builder. The builder gave bills in payment to the sub-contractors, but owing to the builder's failure they were not met. The sub-contractor thereupon brought an action to recover the amount from the clients, and succeeded, Mr. Justice Channell deciding in their favour on these grounds :—

(1) The clients were the real principals, as the contract was to procure something for their benefit which

(2) Was to become their property, and

(3) As regards the terms of the contract *they* were the persons interested, not the builder. The Judge expressed the opinion that when the clients' architect instructed the builders to place the order with the sub-contractors on the terms of their quotation, the quotation having been invited by the architect who was the clients' agent, the architect thereby directed the builders to make the contract for the clients.

This decision has been received by all sub-contracting firms with natural jubilation. The responsibility it imposes upon the client through the architect is obvious. It appears imperative in future that architects should, before instructing builders to accept sub-contracts, obtain a written undertaking from the sub-contractor that he will in no event look to the client for payment. I may add that the Practice Committee is now dealing with this vexed question of sub-contractors, and it is to be hoped some way out of the difficulty may be found.

The Ownership of Drawings.

The law appears to be established by two cases :—*Ebdy* v. *Gowan* and *Gibbon* v. *Pease*. The former is an old case in which the building was not carried out, the architect being paid

the two and a half per cent., and claiming to retain the drawings. The Court decided against him.

In the second case, *Gibbon* v. *Pease*, the previous case was followed, both in the Divisional Court and the Court of Appeal.

In the lower Court it came before Mr. Justice Ridley, who held that the law was governed by *Ebdy* v. *Gowan* and *Ex parte Horsfall*, the latter a case dealing with the same point as regards a solicitor's papers. He refused to hear evidence as to custom to the contrary.

The Court of Appeal supported the Judge below, adding that even if he had admitted evidence as to custom it would not have availed, as a custom must be reasonable, and such a custom would be unreasonable and bad. The opinion has been expressed in the profession that the case ought to have been carried up to the House of Lords. As it stands, the retention of the drawings by the architect by special agreement with the client seems the only resource available to us. An interesting Paper on the subject was read before the last International Congress of Architects in this country by Mr. H. H. Statham.

Fees.

The mention of the last subject upon which I shall speak may perhaps restore such of you as I may have already reduced to collapse, and act as the sorbet to the banquet of horrors which has preceded. It is that of "Fees," and I will be brief upon it, dealing with two cases only, which show the view taken by the Courts.

The first case is that of *Tree* v. *Mitchell*, tried before Mr. Justice Walton in 1909. It involved the question of abandoned work, and also of the builder's estimate exceeding the sum originally mentioned by the client as his limit of expenditure. There was also a complaint that the drawings were not prepared by the date agreed, as the result of which the client had to change his arrangements.

The house was to have been erected at St. Leonards, Sussex. The original expenditure mentioned by the client was £2,000. The architect advised it was quite inadequate, and suggested £3,000, but was told to proceed. The lowest tender was £5,400, due to the addition of oak panelling, parquet floors, and other luxuries. The client admitted the advice as to £3,000, but said he was not informed the luxuries would increase that amount.

The Judge, in summing up, said he was satisfied that the luxuries were added with the client's knowledge, but that no definite statement was made by the architect about them. He also pointed to the unsatisfactory feature that there were no definite terms drawn up upon which the architect was to act. The architect had claimed upon the Institute scale, namely three per cent., which amounted to £347, the work being abandoned. The Judge admitted the sum so arrived at was fair "if the scale was adopted," but gave the architect £200 only, as the case was, to use his expression, "a peculiar one."

With all respect to the learned Judge the only peculiarity about the case would appear to be the judgment. The case seems a typical one. The client expects eighteenpence f r a shilling all through, and notwithstanding the architect's warning goes on, hoping a miracle will happen. The miracle does not happen, and finding he has been wrong from the first the client abandons his intention of building, and seeks to throw the cost of his mistakes upon the architect. The amount awarded to the architect seems at variance with the opinions expressed by the Judge in awarding it, and I think we shall all agree with his lordship in one observation he made, namely, that it was "a very unfortunate and extremely unsatisfactory case."

At the same time, if there is a moral for us it is this. That the client should be regularly

kept informed in writing by the architect of his position from time to time as the various stages of the matter are reached, so that in the event of dispute later he may be able to meet complaints with written evidence. Also that the sooner we get a schedule of charges which we can safely put into a client's hands as the basis of our contract when accepting a commission the better for us.

The second case, and the last with which I propose troubling you, was that of *Brown* v. *Meckel and Co.*, tried before Mr. Muir Mackenzie, the Official Referee, in 1909. The details of the case were of an ordinary character, and need not be quoted, but the learned Referee in giving judgment elected to make some observations upon the Institute scale. He said that it had been repeatedly pointed out by the Judges that there was no implied obligation on a client to pay upon the Institute scale, but that an express agreement must be obtained, and that the scale, therefore, could not be considered except so far as the fact that it was a scale and had a certain amount of sanction attached to it by the weight of the repute of the persons who prescribed it.

DISCUSSION OF THE FOREGOING PAPERS.

Mr. Leonard Stokes, *President*, in the Chair.

Mr. A. M. BRICE, Barrister-at-law, rising at the invitation of the President, said that the Papers had raised quite fairly many legal points, but he hoped to deal with some of them. The relationship of the architect in a contract is two-fold. He is first and foremost the agent of the building owner, mainly for the exercise of ministerial acts—amongst others, giving interim certificates. Many of the difficulties referred to in the Papers arose from the fact that there had been some confusion between the interim certificate and the conclusive certificate. In giving an interim certificate, an architect is merely exercising a ministerial office ; it is only in giving a conclusive certificate that he is acting as an arbitrator or quasi-arbitrator in a judicial capacity. Directly he makes a final assessment of what is due to the builder and a final assessment as to the quality of the materials, he then exercises that judicial function which has been bestowed upon him, not only by the building owner, but also by the builder, a consenting party to the contract. Of course the architect, as a ministerial agent, as an employee, can at any time be dismissed by the building owner ; and if so dismissed, even if wrongfully dismissed, he cannot claim to continue to act in his capacity as architect, for the excellent reason that an employee, seeing that he renders only personal services, cannot in law demand specific performance. He cannot, for example, ask for an injunction against the employment of another architect in his place ; his only claim is for damages for wrongful dismissal. But as regards the second and more important position that he holds as quasi-arbitrator between the two parties, his position as owner's agent disappears ; his agency, which may at any moment be revoked by the employer, ceases to be revocable then because the consenting parties to the contract, the building owner on the one side and the builder on the other, have in point of fact made a submission in the sense of the Arbitration Act, and that is irrevocable. He is appointed an arbitrator or judge between them, and neither the one party nor the other can revoke it, though of course both of them can. That was a short explanation of many of the difficulties which present themselves to the lay, or even the quasi-lay mind, of what had been brought forward that evening, and that was the reason why *Robins* v. *Goddard* had not entirely been put out of court by the subsequent case. Taking first Mr. White's Paper, he agreed that the lawyers might deserve some hard knocks, but it must be remembered that the parties came into Court with the express object of obtaining from persons trained in dealing with these very questions the precise meaning and limitation of a set expression or group of words. It was for the judicial mind which had been trained to that end and had an enormous number of precedents in its memory, to say what had been recognised as the true interpretation of the very terms chosen by the parties themselves, terms which now they were not able to understand. Mr. White mentioned something about the builder, after the usual twelve months' maintenance clause had expired, being free from all further responsibility towards the client. He (Mr. Brice) differed from that in certain contingencies—for instance if there had been fraud or defective work. Again, the Statute of Limitations does not run from the date of the original work, but from the date on which that fraud or defective work might reasonably have been discovered. For example, if the builder, in the absence of the architect—who had gone away, say,

for four or five hours—took the opportunity of the architect's temporary absence to put in a lot of bad work and cover it up, that clearly was fraud which the architect could not reasonably discover at that time ; but when subsequent events threw a clearer light on the actions and character of the builder and caused them to be inquired into, or when the defects in course of time naturally made themselves visible, the fraud was discovered for the first time reasonably, and the Statute of Limitations only then begins to run. Mr. Greenop mentioned that the architect unfortunately stands in a position of extreme vulnerability to the law's assaults. It must be remembered, however, that the architect also stands in a position of extreme dependence on the law's protection. While one party thinks he is assaulted, the other party thinks he is protected —and he really is protected. With regard to the case *Findlay* v. *Roques and Carvell*, where the lady client set up a counter-claim for negligence on the ground that she was wrongfully advised as to the financial possibilities and risks attending the venture, it must be remembered that the architect, as a professional man, whether qualified by examination or otherwise, is always subject to the law's control in so far as he holds himself out as able and willing to carry out the work of an architect. He (Mr. Brice) ventured to submit that advice as to the possible demand in a locality for a certain class of property is not properly an architect's work : an architect does not make himself liable for advising upon a financial speculation. He may be foolish—and in his (Mr. Brice's) opinion he would be foolish—to go beyond his profession and advise on points like that ; but the client could not recover damages against him, *qua* architect, for having tendered his views as to financial possibilities in the future. With regard to the case of *David Lewis Trust and Levy* v. *Graham*, it was true that the work was at Manchester and a London architect was engaged, but there was a clerk of the works, and he is the eyes of the architect, and a man is responsible for the acts of his agent. Then there is the case of *Robins* v. *Goddard*. In that case the certificates given by the architect were interim certificates, not conclusive certificates ; therefore if they were not conclusive certificates he could not have been arbitrator in giving those certificates ; he was merely the agent of the client. He became the arbitrator when he gave the conclusive certificate. In the case of *Roberts and Co.* v. *Hickman and Co.*, it was a question of a balance of account, and therefore of a final certificate. It was when issuing the conclusive certificate that the architect became an arbitrator. In that case there was held to be fraud and collusion between the architect and the building owner—and fraud, of course, vitiates any contract and any certificate. Therefore that case did not over-ride or reverse *Robins* v. *Goddard*. With regard to the sub-contractor, of course Mr. Greenop was right when he said that if the architect went to the sub-contractor and ordered work from him, and told him he must look to the builder for payment, and the sub-contractor accepted the order upon those terms and conditions, he could have no possible action against the building owner. The point in that case was that there was nothing of the kind said, that the sub-contractor did not know he had to look to the builder ; he merely had a general order given by the architect in his capacity as agent to the principal or building owner, and he was quite entitled to bring an action in consequence. But if the architect said he only gave the order on condition that neither he nor his principal was to be responsible for the amount of the order, then of course no sub-contractor could have any possible claim, either against the architect, or his principal, the building owner. It might be added that, if the architect told the sub-contractor that he might look to the principal for payment, the principal might not be liable because the architect might be exceeding the limit of his authority. That also applied to the builder, and if the builder chose to carry on work upon instructions of the architect which he must know were beyond the authority of the architect, because that authority was defined in the terms of the contract, he could not bring his action against the building owner ; because he was a party to the contract he would be held to know that the architect had exceeded his authority.

Mr. G. R. BLANCO WHITE, Barrister-at-law, said he should like to express his thanks to the Institute for the two exceedingly interesting Papers he had heard that evening. There were one or two points in connection with them which he should like to refer to. The first was the complaint that a building contract is interpreted by the Courts of Justice in the same way and with the same strictness as they would interpret any other contract. From the point of view of a lawyer, it seemed to him that the complaint was not well founded. It must be remembered that not only is an architect concerned in a building contract, and a builder, but the building owner, who is a layman, is also concerned ; and the layman cannot be expected to understand building from the point of view of an architect ; and therefore naturally, as far as the Courts are concerned, they must interpret it like an ordinary contract, just because of the fact that one of the parties to the contract does not, in many cases, understand anything at all about building. Many of the questions raised in the Papers had been laid before the Meeting as though they were general decisions of the law, when really they were only decisions on the particular contract, or the particular part of the contract, which was before the Courts. In every one of these cases what the Court had to say was, not what is the law relating to architects, but what is the intention of the parties as laid down in the particular contract before them. If the particular clause of the particular contract had been interpreted before, it was simple, but

otherwise what they were considering was not the law generally, but the intention of the parties from the particular contract. The question had been raised that evening as to whether an architect is an arbitrator or an agent. That again is a question which must depend on the contract—what the architect is made by the contract between the parties. And under some of the clauses of this particular contract, the Institute Contract, the architect happens to be made the agent, and under some clauses he is made an arbitrator between the two parties. For instance, in Clause 30, the clause which deals with certificates, it says that when in the opinion of the architect a certain amount is due, then he is to issue a certificate to the builder. There he stands to act as arbitrator, he is to express an impartial opinion, independently of anything said to him either by the employer or representations made to him by the builder that he is in need of money. He is to express his opinion, and give his certificate accordingly. In other clauses also he acts as arbitrator. For instance, if the architect's name happened to be filled in under Clause 13 as to measure and value, he would there have to act impartially. If his name were filled in under Clause 32, as it frequently is, that he should act as arbitrator, he would have to act impartially. But under other clauses the architect is clearly acting as agent for the employer. For instance, under Clause 12, which deals with variations and extras, he acts as agent, and he only has to take the orders of the employer, and is not concerned with the builder. The application of this, as far as the Papers that evening were concerned, was to the remark made by Mr. Greenop, that it seemed to him that the case of *Roberts* v. *Hickman* was an entire reversal of *Goddard* v. *Robins*. But that was surely not the case. *Roberts* v. *Hickman* dealt with the question of certificates where the architect had to act impartially, had to use his own judgment and act as arbitrator; whereas the case of *Robins* v. *Goddard* dealt with the case of damages for defective work. The question in *Robins* v. *Goddard* was a remarkably interesting question—viz. as to whether the intention of the contract was that the only remedy of the building owner should be under Clause 17 for any defects—that is to say, whether the only liability of the builder, as far as defects were concerned, should be to put the building right in accordance with the maintenance clause, or whether in addition the builder was liable for a common-law action for doing defective work. And *Robins* v. *Goddard* settled the question raised by Mr. White in his Paper; it was settled in that case that the building owner had his action for defective work in addition to the rights that he had under the machinery of Clause 17. It was merely a question of interpretation of the Institute Contract. The Court said: "Here we have a contract; we have to find out as best we can what is meant by that contract; and the conclusion we come to is that Clause 17 is merely giving the building owner an additional remedy, which does not exclude his common law remedy to bring an action for defective work against the builder." Whether the Court guessed rightly in interpreting the contract was a different question, but if the Court guessed wrongly it was not fair to put the whole blame on the Court; some of the blame should be put on those who drew up the contract. In that, and in several other places, one felt that at the present time this contract was ambiguous. Take, for instance, Clause 12: The contractor shall, when authorised by the architect, or as provided by Clause 5, vary by way of extra or omission. There was the case of *R.* v. *Peto*, which said that extra or omission does not cover alteration. One would have thought it was the privilege of the architect at the present time that he should be permitted not only to add a room or to cut one away, but also to alter a room. And when it was considered that there exists the case decided in the highest place, the Exchequer Chamber, saying that extra or omission did not give power to alter, it seemed clear that the contract should be phrased differently. That particular clause, not content with one ambiguity, went on to say that, "such authorisation is to be sufficiently proved by any writing," and it had recently been held that "sufficiently proved" meant the authorisation must be in writing. It was ambiguous; "sufficiently proved" may either mean writing is one way of proving it and there may be other ways, or it may mean writing is the only way of proving it. That was an ambiguity which, some day, some building owner would settle by bringing an action, at great expense to himself. Meanwhile it might be well to alter the word "proved" in this clause. There was no doubt that this contract needed revision in parts. Again, it had been suggested that they were dealing with a technical matter, that the Judges were not trained in this particular technique, and that consequently disputes should be referred to a non-legal tribunal. Nor, however, was the building owner an expert. It was a matter which, in practice, both parties must accommodate one to another. The building owner ought to have the contract fully explained to him; often he must sign a contract without fully understanding what he was signing. One or two other points suggested themselves. With regard to the £600 damages increased to £750, there was nothing in that, because it was a jury case, and it was just a question of practice. The plaintiff had to ask for something, but was not allowed to tell the jury what, otherwise people might ask for £200,000 when they had no right to ask for more than £100. It sometimes happened that when £600 was asked for, the jury, not knowing the amount, awarded £750, and the plaintiff would get the Judge's permission to take the £150 as well as the £600. That, he thought, was what happened in the case mentioned.

On the motion of the President, further discussion was adjourned to a date hereafter to be arranged.

REVIEWS.

FRENCH ARCHITECTURE, 1494 TO 1661.

A History of French Architecture from the Reign of Charles VIII. till the Death of Mazarin. By Reginald Blomfield, A.R.A., M.A., Hon. Fellow of Exeter College, Oxford, Author of "A History of Renaissance Architecture in England," &c. With Drawings by the Author, and other illustrations. 2 *vols. la.* 8*o.* 1911. *Price* 50*s. net.* [*G. Bell and Sons, Ltd.*]

In this recently published book, Professor Blomfield has given us a work which is justly entitled to rank with his *History of Renaissance Architecture in England*. And perhaps no higher praise could be accorded to the scholarly author of the two well-written, well-illustrated, and well-produced volumes which will doubtless form a welcome addition to the libraries of many of his professional brethren.

Within the limitations he has laid down, viz. from its tentative commencement towards the end of the reign of Charles VIII. until its maturity in the middle of the seventeenth century, Professor Blomfield reviews, step by step, the rise, growth, and development of French neo-Classic architecture in a comprehensive, vivid, and essentially sympathetic manner. When "Mediævalism as a living force died with Louis XI." that monarch's policy of seclusion and national isolation was soon reversed by his successor. Thus the end of the fifteenth century saw the first of those reckless adventures in Italy which drew France into the vortex of international politics, created new social conditions, and profoundly modified the whole outlook of her national life. As a natural consequence the French nobility awoke to the fact that "the courts of Italy were pleasanter places than the ill-lit rooms of their feudal castles, and that there existed an art which aimed at and attained a beauty and joyousness of life never dreamt of by the sad and patient artists of the North." So, although as Professor Blomfield reminds us, architecture has always been "one of the finest expressions of French genius," yet at its commencement the particular phase of that art which is now under discussion was exotic and not in the nature of a natural development.

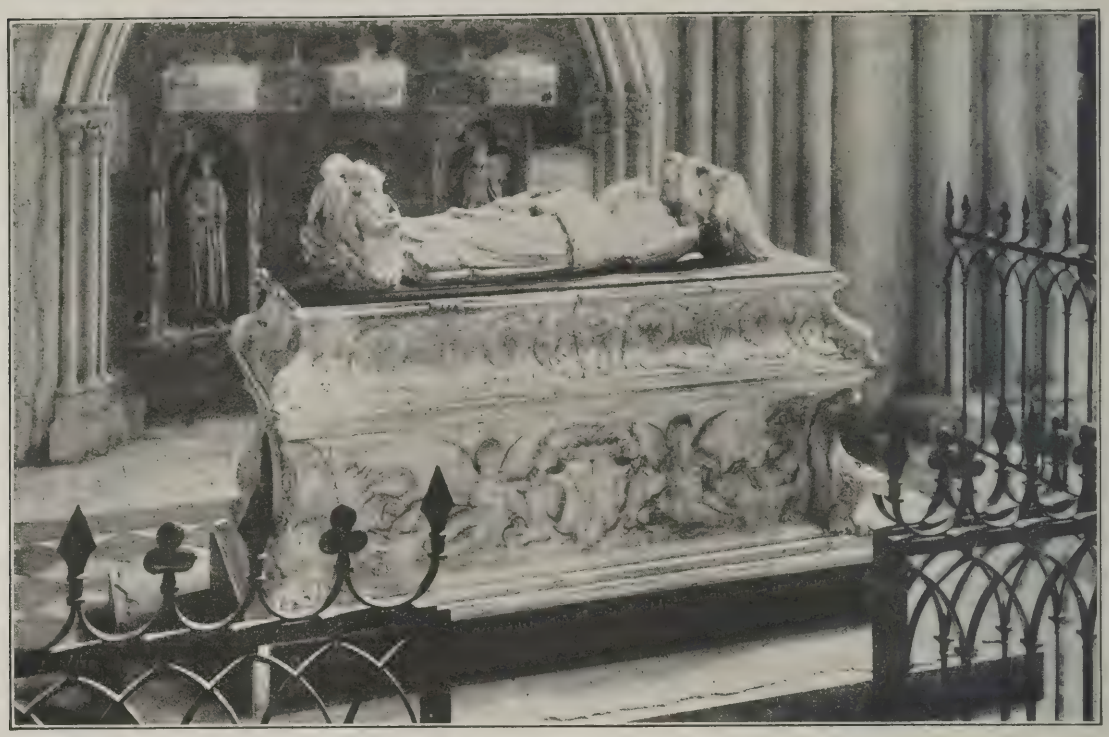
Examples of the first isolated attempts to introduce Renaissance work into France are found in the carved sarcophagus erected to the memory of Charles, Count of Maine (who died in 1472), in the Cathedral of Le Mans, and in the beautiful monument, placed in Tours Cathedral in 1506, to the memory of the children of Charles VIII. But, notwithstanding these and other fragmentary evidences of the introduction, at a comparatively early date, of Italian art into France, the artistic output of the first Italian immigrants was, practically, limited to ornamentation, painting and carving. Consequently, the influence of these early pioneers of the "new fashion" in architecture had no direct effect upon the French master-builders of the time. On the contrary the latter continued to follow their own peculiar methods of building, "finding stonework for the Italian ornamentalists to carve, but otherwise indifferent to the new ideas."

However, another incursion of Italians into France, made in 1528, produced results which were far-reaching and revolutionary in their tendencies. On that occasion, thanks to the encouragement given to these alien artists and craftsmen by François I., the art of the Renaissance took deep root. Of the many architectural achievements of that monarch "qui aimait bâtir," that of Fontainebleau is pre-eminent, and Professor Blomfield's copious references both to the building operations and to the group of notable men who at one time or another were associated with the work make pleasant and instructive reading.

Shortly after his release from a Spanish prison, François I. commenced the erection of those magnificent structures which, situated amidst the picturesque surroundings of the forest of Fontainebleau, were destined to become the scene of many of the most remarkable events in French history. Commenced in 1528, the first group of buildings was completed seven years later, when the decorations were entrusted to a mixed body of Italian, Flemish, and French craftsmen without any responsible artist to direct them. But before long the control of the ornamentation passed altogether into the hands of the Italians, for in the "Comptes des Bâtiments du Roi" there is an entry of April 1536 recording the payment of 50 livres to Il Rosso for superintending the work in the Grand Gallery during the month of April, whilst Primaticcio was paid 25 livres as "conductor and designer" of stucco work and painting in the Queen's chamber.

Much additional light is thrown upon the individual share of the artistic work at Fontainebleau executed by such men as Il Rosso, Primaticcio, Serlio, and Philibert de l'Orme, and the latter appears to have been largely instrumental in influencing the ultimate national assimilation of the foreign style. For it was "De l'Orme and his contemporaries who carried the art up to a certain point of development from which it advanced by slow degrees to the splendid architecture of the latter part of the seventeenth century." And of Philibert de l'Orme, "the most interesting and original figure of that brilliant group of artists who appeared on the stage after the death of François I. and held it with varying fortunes for the next thirty years," Professor Blomfield has much to say.

Although De l'Orme's ability as an architect received scant recognition from François, one of the first acts of Henri II. was to appoint the hitherto neglected artist "Architect to the King and Inspector of all the Royal Buildings." Councillor and almoner in ordinary to the King, Abbé of Géveton in Brittany, of St. Bartholomew and St. Eloi at Noyon, and of Yvry in the diocese of Evreux, the career of De l'Orme from 1547 to the death of his royal patron in 1559 was one of unbroken pro-



TOMB OF THE CHILDREN OF CHARLES VIII., TOURS CATHEDRAL.

TOMB OF CHARLES, COUNT OF MAINE, LE MANS CATHEDRAL.

sperity. Among the more important of his architectural works, the great house of Anet on the Dure, designed for Diane de Poitiers, the residence, nearly two hundred years later, of the intriguing Duchesse du Maine, and the well-known galleries built across the Cher at Chenonceaux are notable. In 1564 De l'Orme prepared a fine design for a new palace at the Tuileries, which was intended by the superstitious Catherine de Médicis to replace the recently demolished royal residence, Les Tournelles, where Henri II. had died from the effects of the injuries received while jousting with Montgomery. But from its very commencement the Tuileries was an unfortunate building.* Only a small portion of De l'Orme's plan had been carried out when Catherine stopped the work, and the original design was so modified and altered by successive rulers that the structure, which ultimately perished by fire in the troublous days of May 1871, had little in common with De l'Orme's splendid conception. In chapters VI. and VII. Professor Blomfield deals with the artistic careers of Jean Bullant, Lescot, and Goujon. The former succeeded De l'Orme as architect of the Tuileries two years before that building was finally abandoned by Catherine de Médicis—Bullant, who was the first neo-Classical man in France to use the colossal order (in the court of the Castle of Ecouen, see illustration Plate LII.), was also the first " to handle architecture as an art complete in itself, having its own technical conditions and its own peculiar ideals."

Of Lescot very little is known, save for his work at the Louvre and for the fact that he " discovered " Goujon, with whom he was closely associated in artistic work. As to Goujon his influence on French art is eulogistically described in the following words : " He taught his countrymen that the function of sculpture is not didactic or literary or blood-curdling, but solely the search for expression of beauty. He taught them, too, the inestimable lesson that sculpture and architecture must go hand in hand, each supplementing the limitations of the other, architecture giving the right environment to sculpture, sculpture giving full utterance to that which can only be hinted at by architecture."

Following a brilliant study of the work of French sculptors in the sixteenth century is an interesting account of the Du Cerceau family " typical of this stage " (*i.e.* the last thirty years of the sixteenth century) " both in their accomplishment and in their failures, in their facility of ornament and in their merely amateur conception of architectural design."

When Henri IV. ascended the throne and restored peace to France the finances of the country, exhausted by many years of internecine strife, were in a ruinous condition. And, having regard both to the paucity of the means at the King's disposal and to the unsettled social and political conditions of his reign, it is the more remarkable that " in the few years before his death his genius evolved those conceptions of civil architecture and of the training of artists which have enabled France to establish its ascendency in these matters over the civilised world."

The encouragement shown by the King to architecture and the allied arts was brought about by certain definite political motives. " France and I," he wrote in 1598, " have need of a breathing space," and by establishing the arts in France he sought to consolidate the State, " not only by affording employment to a large body of skilled workmen, but also by direct appeal through visible embodiments of the greatness of the State, and its claims on the devotion and services of all good citizens."

During the reign of Henri IV., the Pont Neuf was finished, the Place Royale and the Rue Dauphine laid out, and the neighbourhood of the Arsenal much improved. Large additions were also made to the Tuileries, of which only a portion of one side of De l'Orme's design had been completed, and the gallery connecting it with the Louvre was constructed. The improvements carried out by the King in the city of Paris were conceived " with a purpose as definite and statesmanlike as that of Augustus Cæsar when he re-organised Rome." And of his successors the first Napoleon alone approached him in giving symbolic expression to the underlying motives which influenced his architectural projects.

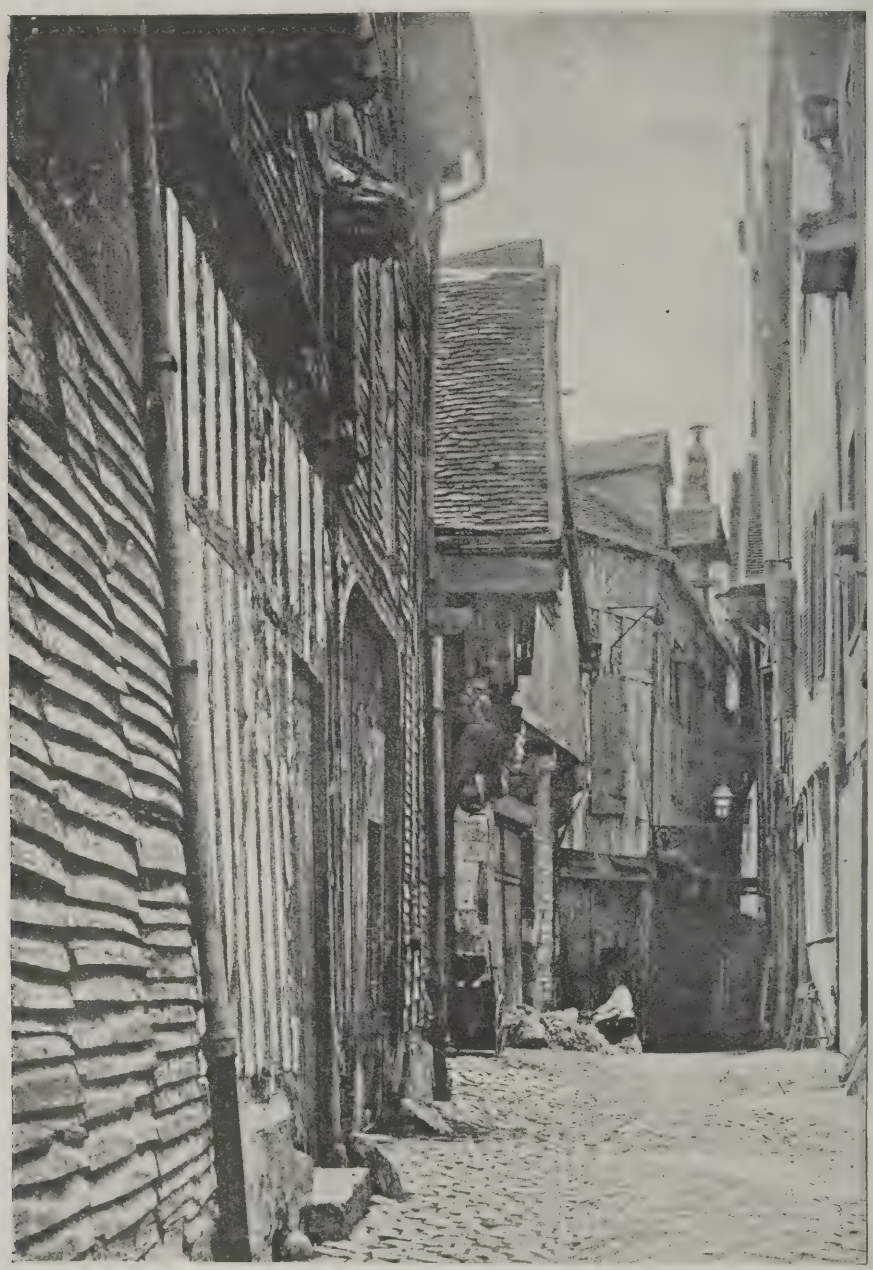
An extract from the letters patent of 1608–9, confirming the privileges of the artists of the Louvre (which Henri also intended to complete), proves the King's intention to re-establish the arts in France, viz. " Since the culture of the arts is not the least among the benefits that have resulted from the peace, we have so arranged our buildings at the Louvre that we can conveniently lodge here a number of the best workmen and most competent masters that can be found, painters, sculptors, jewellers, clockmakers, engravers in precious stones, and others, not only for our own use, but also that they may serve as a nursery of craftsmen who may spread the knowledge of the arts throughout our kingdom." In his efforts to foster and encourage national art the King determined as far as possible to employ French artists in preference to foreigners, and all his architects, and also his sculptors with two exceptions, were Frenchmen.

Although the *Grand Monarque* is usually regarded as the founder of the system under which the modern tradition of French art has been developed, yet Professor Blomfield states that the idea originated with Henri IV. and not with Louis XIV. For " from the artists of the Grande Galerie sprang the French academies, from the

* None of the princes born within the walls of this palace ever succeeded to the throne of France. The first Napoleon's son (the King of Rome), the Comte de Chambord of the House of Bourbon, the Comte de Paris of the Orleans family, and the Prince Imperial were all born there.

King's *pensionnaires* at Rome the future establishment of the Villa Médicis."

Of equal importance was the work carried out by Henri IV. in Paris with the object of improving the hygienic outlook of the capital.



AN OLD STREET IN TROYES: LA RUE DES CHATS.

It is difficult to realise the condition of Paris at the commencement of the seventeenth century when drainage and sanitary regulations were practically unknown and there were but five or six open public squares of any importance. M. Poirson, in his *Histoire du Règne de Henri IV.*, describes the streets as being so narrow that it was difficult even for hand-carts to pass through them. The houses, chiefly of wood and plaster, had overhanging upper stories, which in some cases completely shut out the sky. Indeed, the inestimable advan-

tage of living in the full enjoyment of light, air, and sunshine was a privilege enjoyed only by wealthy Parisians. An old street in Troyes (illustration, Plate CII.) still shows an aspect of civic life that must have been general throughout France at the time. This street, or rather alley, known as the Rue des Chats, is only six or seven feet wide, and in some parts of it the stories overhang to an extent that renders the sky invisible. In addition, in parts of the street "the upper stories are kept apart by wooden struts which appear to be almost as old as the houses themselves."

By virtue of an ordinance issued in 1600 and reissued eight years later for the enlargement, alignment, and paving of streets, a considerable number of civic improvements, under the general direction of Sully as "Grand Voyer" or Surveyor-General, were effected at the Pont Neuf and the Samaritaine. Later the Place Royale, now the Place des Vosges, was laid out, to the permanent improvement of the Quartier St. Antoine.

In 1607 the Place Dauphine, built on a piece of waste land some 3,120 toises in area, and intended "to form a Change and meeting place for merchants in the centre of the city," was commenced, and new streets, "such as the Rue Dauphine, thirty-six feet wide, were formed to open it up." This undertaking is a striking instance of the wise and far-seeing policy of the King in regard to civic improvements, for at his suggestion the vacant land was let to Achille Harlay, President of the Parlement, at a rental of one sou per toise, on condition that all buildings placed on it followed the official design, which comprised brick and stone elevations, arcaded on the ground floor, on all three sides of the triangular space. (Illustration CVI.)

The object of the last and most important building enterprise entered upon by Henri IV., viz. that of the Porte et Place de France in the Marais, is said to have been mainly a political one. Indeed, the scheme was formulated with no less an object than that of obtaining national unity. For "the unity of Breton, Provençal or Burgundian, as Frenchmen, did not exist." In order to break down this individualism and to induce his subjects to regard themselves first and foremost as Frenchmen, the King commenced the scheme of civic improvement which M. Poirson says was "the most national, the most entirely French conception that any sovereign ever dreamt of." Had the proposal, which is described by Professor Blomfield in the following words, been carried out it would have been a magnificent seventeenth century transformation of Paris.

"As the countryman entered Paris from the north, he passed through an imposing gateway, the Porte de France, of brick and stone, with wings right and left, and found himself in a broad roadway, on the further side of which was an open semicircular space, 480 feet wide at the base, and set out with a 240-feet radius. Round this space were set seven separate blocks of buildings of brick and stone, the façades of which were designed in seven bays, with a ground floor arcade, engaged tourelles at the angles, and steep pitched roofs with lucarnes and a cupola in the centre. Each block measured 78 feet on the face, and was separated from its neighbour by a street 36 feet wide; and to these streets were given the names of the principal provinces, Picardy, Dauphiné, Provence, Languedoc, Guienne, Poitou, Bretagne, and Bourgogne. At the back of these blocks or 'insulæ' were gardens, and beyond, at a distance of 240 feet from the buildings, a street laid out concentrically with the semi-circle of the Place. Streets radiating from the centre divided this concentric roadway into lengths which were called by the names of the less considerable governments, Brie, Bourbonnais, Lyonnais, Beaune, Auvergne, Limousin, Perigord. Finally, the continuations of the radiating streets beyond were called Saintonge, La Manche, Touraine, La Perche, Angoulême, Berri, Orléans, Beaujolais, Anjou. . . . The new streets were to be continued right away through Paris from north to south, one roadway starting from St. Denis was to come to the Pont Neuf and the Place Dauphine, cross the bridge, and so out to the southern boundary of the city, another to the left ran out to the Isle St. Louis." Sully commenced the work in 1609, but it was abandoned after the King's assassination in 1610. Although it was resumed by Richelieu in 1626, that statesman had neither the time nor the opportunity to carry the scheme much further, and the only record of Henri's magnificently conceived plan now in existence is the bird's-eye view engraved by Poinsart in 1640.

On the whole, Professor Blomfield has made out a good case in support of his statement that "in the largeness of his conceptions, and the statesmanlike patriotism of his aims, Henri IV. was far ahead of his time. Louis XIV., with all his ambition for the greatness of his monarchy, could not rise to that high level; but he was fortunate in his generation, and he reaped the benefit of ideas which were due to the genius of his grandfather."

The chapter on Marie de Médicis, Salomon de Brosse, and Du Cerceau (Jean Androuet) contains an exhaustive account of the Luxembourg, together with descriptive and critical notes on three other famous buildings, viz. the west front of St. Gervais, the Protestant Temple of Charenton, and the Hall of the Palais de Justice, all of which were designed by the Queen Regent's architect, Salomon de Brosse. Early in the seventeenth century, according to Berty between 1624 and 1630, the well-known Hôtel de Sully was erected after the designs of Jean du Cerceau, who was also the architect of the Hôtel de Mayenne. But better examples of the architecture of the period are to be found in two gateways of unknown authorship at Toulouse.

Jacques Lemercier, who was born at Pontoise in

1583 and died at Paris in 1654, was regarded as the leading architect of his time. Among the first churches to be built in Paris in the new manner introduced by the Jesuits."

CHURCH OF THE VAL DE GRÂCE, PARIS.

many important buildings which he carried out during the course of his long and honourable career was the Church of the Oratory, " one of the

For many years the favourite architect of Richelieu, Lemercier's great opportunity came in 1629 when the Cardinal statesman, who had been

appointed " Proviseur " of the Sorbonne, proceeded to rebuild the College. Six years later, Richelieu laid the first stone of the Church of the Sorbonne, perhaps the best example of Lemercier's architectural skill now existent.

St. Roch, in Paris, is another of Lemercier's churches, and a third is the one he designed for the Cardinal at the town of Richelieu. Blondel considers that, in his domestic and civic buildings, Lemercier failed to attain an equal measure of success, but his powerful patron seems to have had the greatest confidence in his architect's versatility, since he employed him both for his house in Paris (afterwards the Palais Royal) and for the château and township of Richelieu. Commenced in 1629, the Hôtel de Richelieu was planned, in the first instance, on a moderate scale, but as the Cardinal advanced in power his house grew proportionately. Although, as a result of the numerous alterations and additions made by successive owners, it is now exceedingly difficult to trace Lemercier's work, yet, with the aid of old engravings, Professor Blomfield has been able to give a vivid picture of the building, in the main, as it was left by its original architect. The description of the immense château at Richelieu, which was demolished in the eighteenth century, is replete with interest and well illustrated, and Lemercier's additions to the Louvre are also fully discussed and ably criticised.

In the article (Chapter XVII.) on Pierre le Muet the author points out that whilst Lemercier " had from the first adopted the strict neo-Classic manner as then understood " by a close adherence to the regulation orders and their concomitants, Le Muet, on the other hand, was always more or less influenced by the " provincial " or, as it is generally termed, " free " treatment of architecture in brick and stone which made its appearance in the reign of Henri IV.

So when Le Muet published, in 1623, the first edition of his " *Manière de bien bastir* " this " provincial " manner was still popular and was adopted in nearly all the plates of the book, and Le Muet himself, " though he gradually fell in line with his contemporaries, never entirely lost sight of this favourite manner of his youth." A treatise on the five orders published by Vignola in 1642 appears to have been the next literary effort of the architect, and this was followed, in 1645, by a translation from Palladio's " Orders."

In 1647 Le Muet produced another edition of his book on building, in which he describes himself as " architecte ordinaire du Roi et constructeur des desseins des fortifications en la Province de Picardie." This edition contains a second part illustrating the author's designs for various mansions, including those at Pontz in Champagne, Tanlay in Burgundy, Chavigny in Touraine, and three Parisian houses.

Of the country mansions, Pontz and Chavigny are now destroyed. Tanlay, however, " probably the most charming country house in France," is still in existence, fortunately in an " unrestored " condition. Its " courts and vast dependencies, its canal with the water temple or château d'eau (illustration CXLIII.) at the end of the long line of limes, its broad moat of clear running water, render it irresistibly attractive."

But whilst Lemercier and Le Muet may have their places assigned to them, François Mansart, born at Paris in 1598, was " too great an artist to be classified." His earliest work, the Hôtel de la Toulouse (now the Banque de France), led to his employment by Louis XIII. at the Church of the Feuillants in the Rue St. Honoré for the west front, of which Mansart supplied a hopelessly bad design. Fortunately, François Mansart lived to produce work of a very different quality, as in the stately *Aile de Gaston d'Orléans* at the Château de Blois, the great house at Maisons Lafitte, and numerous other buildings. Of Mansart's domestic work in Paris mention may be made of his remodelling of the sixteenth century Hôtel de Carnavalet, once the residence of Madame de Sévigné, now the Musée Historique de la Ville with its extremely valuable and interesting collection of drawings, models, objets d'art, and antiquities; the Hôtel Conti (now demolished), and the Hôtel d'Aumont, still standing in the Rue de Jouy. On the whole, Mansart's superiority over his contemporary architects is more marked in his ecclesiastical than in his domestic work, notwithstanding the fact that his design for the completion of the Church of the Minimes, near the Place Royale, was anything but a happy composition. But in the magnificent conception of his last and greatest work, the well-known Monastery of Val de Grâce, Mansart's power of design is seen at its best, although, as Professor Blomfield points out, the exterior seems to have been considerably injured in execution. Mansart only remained in charge of the work for about a year after its commencement, when he was superseded by Lemercier, the building being finally completed on the death of the latter by Le Muet. Thus, although Mansart's general design was followed throughout, yet certain variations in detail, which were by no means improvements on the original proposals, crept in.

" Mansart stands apart from his contemporaries and even from his successors, able as they were, in the completeness of his art, his sense of scale, his admirable feeling for proportion, and his splendid simplicity of statement. The part that he played in French architecture was that which Inigo Jones played in England and Peruzzi in Italy. Each of these men was first and essentially an artist, other things only in immaterial degrees. Their qualities were not those that make for immediate success, but they are qualities which, when abler men of affairs have had their day and been forgotten, will make future generations turn again and again to

those rare artists who, under adverse circumstances, have preserved their ideals untarnished to the end."

The space at my disposal permits of only a passing reference either to the lucid account of the influence of the Jesuits on contemporary art in France (Chapter XII.), or to the masterly summary of the development of French architecture from 1600 to 1661 with which the book concludes. In the opening paragraph of this altogether inadequate review of a great literary achievement I ventured to predict that Professor Blomfield's work would be in great request among his architectural brethren. And now that I have had the opportunity of becoming better acquainted with this the latest *History of French Architecture*, I feel that the book, which in all probability is unrivalled in its able marshalling of historical events, leading, more or less directly, to the parting of the ways in art; in its picturesque diction, in its terse and graphic descriptions of old-world times and old-world places, should appeal to a far wider range of readers, and indeed go far towards engendering in the minds of the educated public a better understanding of the true functions of architecture, and a more intelligent and more sympathetic appreciation of the efforts of the genuine workers, both past and present, in that all-engrossing and wondrous art.

A. W. S. Cross [*F.*].

ART-SCHOOL TEACHING.

Should We Stop Teaching Art? By C. R. Ashbee. 8o. *Lond.* 1911. *Price* 3*s.* 6*d. net.* [*B. T. Batsford*, 94 *High Holborn, W.C.*]

As do most people engaged in the teaching of art, Mr. Ashbee sees that the principal difficulty is not to train artists, but to keep them employed on worthy work when trained. If we had an abundance of good workshops the training of artistic craftsmen would be a simple matter. Mr. Ashbee therefore proposes to endow such workshops at State expense, and to sell their products in State shops, on the condition that the masters of the endowed workshops shall train apprentices.

This course has obvious difficulties. The manufacturers will of course object, and are at present able to carry their objection into effect. We may suppose this overcome. Mr. Ashbee wishes to starve out machinery wrongly employed by means of a State subsidy to good work. If the State is to supply the subsidy, we shall have to accept the State definition of "wrongly employed" and of "good work," and our last state would certainly be worse than our first. Mr. Ashbee's scheme could be carried out by private endowment and might prove most successful. As a State scheme it could hardly do other than harm.

The craftsmen being thus accounted for, the architects and the painters are to be trained by their own professional societies. In his remarks on the training of architects Mr. Ashbee lays great stress on the need of a good education in the humanities and of special training in modern construction, machinery, and business methods. He recommends a study of the educational system in use in America, and considers that Faculties of Architecture should be attached to our Universities. With all but the last point we are in hearty agreement, but it may be that something can be said for the "School of Art" in place of the University.

Our Schools of Art were founded for the purpose of producing artists. As Mr. Ashbee points out, they do teach a number of the general public a little art, mainly painting; they produce "Art School teachers," and they train a few artists who apparently cannot earn their living. The first result is no doubt laudable, the second and third are not satisfactory.

It is quite possible to dispense with the "Art School teacher." If we cannot train our students in the workshop we can at least have them taught by men who are engaged in the practice of the craft. If the actual teaching hours are kept short for each individual teacher, teaching becomes a subsidiary occupation and can never develop into a profession, and our Art teachers will be young men who will retire as their outside work becomes more important, to make way for fresh blood. In this way also energetic craftsmen are to some degree subsidised at the beginning of their careers.

But a "School of Art" should be more than a mere institution in which students take classes. It should bring together young artists of all kinds, and should give them such a corporate spirit that in after life the painter, the architect, or the silversmith may never forget that they are all members of one profession. The function of a school is not only to train artists in technique and in form, but to teach them how to think, so that in practice they may attack their work in the right spirit. In a workshop or office the tendency must be to set the student to the task which he can already do; in a school he is set to task after task which he cannot do, and his mind is kept continually on a strain towards something as yet unattained.

The most serious flaw in Mr. Ashbee's proposal is that it tends to separate the various crafts of art, in place of drawing them together. The School of Art has its proper place in modern training, though, of course, no School of Art can do more than prepare its students for an apprenticeship.

We can, however, appreciate Mr. Ashbee's book even though we do not agree with all he says. His frank acceptance of machinery is very refreshing and the book is full of suggestive ideas. Every thoughtful artist must agree with him that the condition of the arts, from basket-making to picture-painting, is not at present satisfactory, but a great improvement has taken place during the last few years, and in this Mr. Ashbee has taken no small part. The book is beautiful in printing and craftsmanship, and is a book which must be read.

Ramsay Traquair [*A.*].

LONDON: THE REITERATED WARNING.

OUR thanks are due to Mr. Paul Waterhouse for his efforts to arouse London from its apathy and indifference in the matter of the proper planning of the Metropolis.

In no smaller degree are we also indebted to Mr. Raffles Davison for his appeal on behalf of the city beautiful. Although their words may be only the echoes of what others have said before, yet they are singularly opportune at the present time in view of the Report of the London Traffic Branch of the Board of Trade.

A strenuous and united effort is needed to focus the opinions of those who have the welfare of London at heart, and to weld them into some practical scheme for its future government.

Sir Herbert Jekyll, in his prefatory note to the fourth annual report, states that "little remains to be done to complete the preliminary examination of the roads," and that the detailed plans they have prepared "would serve as the foundation of a general plan to which town-planning schemes and the future development of London could be made to conform. It is to the want of such a plan in the past that much of the existing trouble in connection with traffic is due."

Speaking of the already covered and congested areas of the older parts of London, Sir Herbert Jekyll points out that "the same difficulties that have arisen in the centre of London are being reproduced in the outskirts. There is, however, this difference, that in the one case the mischief is done, and can only be cured at enormous expense by persistent efforts spread over a long series of years; whereas in the other, it would be largely preventable if a well-considered scheme of improvement were adopted and carried out by degrees."

It would be difficult to produce arguments of greater force than those used by Mr. Waterhouse and Mr. Davison unless it were the calm statement of facts marshalled in the Traffic Report.

Instances of opportunities thrown away and projected improvements thwarted and blocked could be enumerated *ad infinitum*. Wren's plan haunts us like a nightmare. We rail at the City Fathers of the time of Charles II., but we learn not wisdom; Cripplegate, Wood Street, St. Mary Axe, the Minories have all been devastated by fire; but what the City did in Charles II.'s day it did again in the days of Victoria. In each of the cases enumerated the narrow streets were perpetuated and the burnt buildings arose again on the same lines of frontage. Were a thousand acres of the densest parts of London to be devastated by fire to-morrow, no existing law could compel the widening of the narrowest alley by one single inch. Certain powers for carrying out improvement schemes can be put into operation by local authorities under various Acts of Parliament, but the burden of cost falling only on one small section of London instead of on the whole Metropolis, it is found easier, and certainly more profitable at the hustings, to do nothing. Local ratepayers' associations are too frequently the shade which stands athwart a wise and prudent improvement.

One authority, and one alone, can cope with such problems as those under consideration. That authority should have power to step in automatically as opportunity serves, and upon the best advice procurable determine what is proper to be done in the general interest of the whole body. As the whole body is benefited, so should the whole body contribute to the cost.

Until such an authority is established, there seems to be little prospect of seeing the beginnings of a new and brighter London. Bright and noble spots are, of course, to be found here and there, but they only serve to emphasise the darkness behind. Royal Commissions, Select Committees, and Inquiries we delight in, regardless of the cost; we gather their Reports, tie them up and endorse them, and put them away for future use. How long shall this systematic procrastination continue?

In 1905 the Royal Commission approved and recommended, on the suggestion of the Advisory Board of Engineers, the construction of a main traffic artery through London from Whitechapel to Bayswater, passing, *en route*, Liverpool Street Station. There may have been differences of opinion as to whether the route suggested was not capable of one or two minor improvements, but it was a scheme felt to be essential for the relief of the congestion of traffic in the City. Its cost would no doubt have been great at that time, but the lapse of seven short years has increased the cost by thousands upon thousands of pounds. At the present time, right athwart the route of this projected artery the Metropolitan Railway Company are erecting in Liverpool Street a shopping avenue which will probably increase the value of the site by at least £25,000.

The London Traffic Branch, viewing the cost of the road approved by the Commissioners as "well-nigh prohibitive," suggest that "it might be possible to achieve the object they (the Commissioners) had in view, in part at least, by the gradual widening of Euston Road (as and when opportunity may occur), as a first instalment of a scheme for the formation of a broad thoroughfare from East to West along the City Road, Pentonville Road, Euston Road, Marylebone Road, and Oxford and Cambridge Terrace."

It will no doubt astonish many to learn that the Act of George II. under which this important thoroughfare from Marylebone to the City was laid out required the buildings on each side of the road to be set back a distance of 50 feet. The Report goes on to say that "the original building lines which can still be traced were thus 160 feet apart. Had no encroachment been allowed, it

would have been comparatively easy to widen it throughout, but at many places—notably at the junction of the Tottenham Court Road and Hampstead Road with the Euston Road—large blocks of buildings have been allowed to be erected no more than 60 feet apart."

Thus has a noble scheme, formulated in 1775 with the authority of Parliament, been frustrated by the apathy and indifference of local authorities. The London County Council are using their utmost endeavours to prevent further unauthorised encroachments being made on the reserved areas in front of the original buildings, but the constant litigation on the question of the actual position of the general line of buildings renders the work one of great uncertainty.

The future building lines should be fixed once and for all, allowing for a roadway of the first importance. Contrary to the general belief, however, there is no authority in London at the present time empowered to fix such a line except in the case of new roads, when the Council have power to require a width not exceeding 60 feet.

Reverting to the Report of the Traffic Branch, the necessity for co-operation among local authorities on the carrying out of improvement schemes is urged in the following language : " There is, however, no time to be lost, and unless local co-operation can be enlisted as town-planning schemes mature, the possibility of constructing some of the proposed roads may vanish, leaving it for the next generation to seek other routes for the growing traffic, and to construct or widen roads at largely increased cost."

Past experience, however, does not encourage the hope of any very tangible results accruing from efforts in this direction. One instance will suffice : Bishopsgate has now been widened to 70 feet as far as the City boundary at Norton Folgate. At this point a sudden constriction occurs and the projecting houses in Shoreditch jut out some 18 or 19 feet in advance of the new line secured by the City Corporation at enormous expense. Although there are but three or four houses which thus block and mar a noble improvement, yet the Shoreditch Borough are apparently in a position to hold up both the improvement and the traffic at their own free will.

Surely the logical and prudent course (as a temporary measure at least, and pending the formulation of a scheme for the government of Greater London) would be to give definite and comprehensive powers to the existing Traffic Branch of the Board of Trade and to constitute them a Traffic Authority. They should at least have power to fix and determine the position and extent of new roads and the proper width and building lines for old streets that require widening.

Plans of these projected and authorised improvements would be lodged with the local authorities, and town-planning and other local improvement schemes would then be designed in conformity with the general plan—new buildings would have to be set back to the new building lines.

By this means a comprehensive street plan of Greater London would be laid down, the existing congested areas would be gradually opened out, and new districts would be planned with due regard to general convenience and not merely to satisfy local needs.

The London problem is no doubt one of great complexity, involving questions which can only be satisfactorily dealt with by those possessing a wide experience of local government. Some solution, however, must obviously be found, and whilst the practical and the economic must dominate the scheme there is no reason why means should not be devised for the consideration of questions of taste and fitness.

Surely the Institute could not engage in a nobler work than in forwarding the present movement for the creation of a worthy imperial city.

A London Society to watch over the artistic welfare of the Metropolis is, no doubt, a thing to be desired, but as an isolated body the results it could hope to achieve would not be great. The mischief is usually done before such outside influence can be brought to bear upon the authorities concerned. There must be some connecting link in the legislative machine by means of which the services of an Advisory Council shall be automatically brought into action.

How this is to be accomplished is a matter for careful and possibly lengthy deliberation. Suggestions have from time to time been made, and it might tend to forward matters somewhat if a small committee (not confined to members of the Institute) were formed with the object of drawing together these various views and evolving from them a definite scheme which could be embodied in a London Government Bill. The time for such a measure is surely upon us; when it comes we should be ready.

ARTHUR CROW [*F.*].

Some admirably suggestive articles dealing with the improvement of London find place in the New Year's numbers of the *Builder* and the *British Architect*. The former advocates the creation of an Imperial quarter in connection with a general scheme suggested by the necessities of an Imperial City, and some illustrative sketches indicate the great architectural possibilities of the proposal. Part of the scheme would involve the transformation of the whole of the district south of the river from Westminster Bridge to Blackfriars or London Bridge, and this could be brought about without disturbing any buildings of historic or artistic value. The *British Architect* has some telling contributions from Professor Beresford Pite, Sir Aston Webb, and Mr. Paul Waterhouse, indicating matters which show the urgent need that exists for the artistic

control of London. "All must agree," says Sir Aston Webb, "that we want some advising, directing, and guiding hand—and we want it soon, or it will be too late; it needs the wisest and most public-spirited men in this great city of ours to lay their heads together and hammer out a scheme."

CORRESPONDENCE.

Professional Matters requiring Rectification.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Mr. Arnold Thornely, in his Presidential Address to the Liverpool Architectural Society, made several interesting references which should give us furiously to think!

The Institute Schedule of Charges.

No doubt the report of the Special Committee of the Institute, which Mr. Thornely tells us has been considering the question of the Schedule of Charges, will be issued without delay, and, as he says, be an improvement upon the present Schedule.

If not too late, I should like to suggest to the Committee that the new Schedule of Charges should be set out in the clearest manner possible, and printed in a form that might be handed to clients in the event of one being in doubt as to the expectations of new clients.

I have myself on many occasions found that clients, employing an architect for the first time, believe it to be a simple gospel of truth that an architect's fee is 5 per cent. on the cost of the work done, whatever the work may be and however small the cost in proportion to the time necessary to carry it out. It is always very unpleasant to have a discussion as to the charges for one's work, and it would be a great convenience if the Schedule of Charges could be printed so that he who runs may read, and copies be supplied by the Institute in the same way as the Form of Contract. The present Schedule is a hopeless document to hand to anyone.

I should also like to suggest that Clause 9 of the present Schedule should be revised on the lines of the decision given in *Yerbury* v. *Wortley* (House of Lords, 8. 2. 10.), which fixes reasonable remuneration for work actually done, and places the architect in a better position than the "custom of profession."

Ownership of drawings is another point the Committee might settle by setting out in the Schedule of Charges that the fees are for use of drawings only.

Provisional Amounts in Contracts.

I am glad to notice that Mr. Thornely holds the opinion I have expressed in the columns of *The Builder* and other papers with regard to the position of sub-contractors in the event of bankruptcy of the general contractor. This is a matter of great importance to trustees and to the general body of creditors in almost every case of bankruptcy in the building trade, and grave injustice is often done by architects making preferential creditors of sub-contractors by paying provisional amounts direct after an act of bankruptcy, although they divested themselves of all liability for payment by placing orders through the general contractor.

Dry Rot.

Mr. Thornely suggests three methods of overcoming the difficulties caused by recent decisions, but he sees the drawbacks to each of his suggested remedies. It is obvious that the best remedy would be to reverse the decisions by the ruling of higher Courts, and I think the Institute ought to find the funds to fight a case in the House of Lords if necessary, when I am confident architects would be put back into their old position—which is the position of every other profession—that there cannot be a penalty without negligence. It is monstrous that an architect should be held responsible for the appearance of dry rot in a building unless it can be shown that he was negligent of his duty and there is some proof of cause and effect. Dry rot can be so easily introduced into a building after the contract has been completed, that it would have seemed impossible that the architect should be held responsible but for the recent decisions in the Courts. Unless these decisions can be reversed a special clause to disclaim liability for dry rot should be inserted in the Institute Form of Agreement.

The Institute Form of Agreement.

I have personally advocated, for a long time past, the revision of the Institute Form of Agreement, which seems to me to have been drafted with the intention of setting up the architect, like a little god, to judge his own case whenever a dispute may arise. Of course, with few exceptions, architects do not want to be little gods, and when they find themselves obliged to fight under the Institute Contract, it is often because their clients force them to act against their own better sense of justice and fair play, especially under Clause 12.

It will be said that the Agreement was drawn up with the approval of the Institute of Builders. My only reply is, "that is the funniest part of the business," and the only explanation of builders being willing to agree to such a Form of Contract is their sublime faith in architects.

I have met many builders who have never read the Institute Form of Contract, although they have signed a great many, and several architects who have been quite shocked at the discovery of the true position of affairs in cases of dispute.

I hope the Council of the Institute will consider the present a good time to revise "the Form of Agreement and Schedule of Conditions for Building Contracts," generally known as the R.I.B.A. Form of Contract.—Faithfully yours,

JOHN E. YERBURY, F.S.S.

9 Conduit Street, London, W., 13*th Jan.* 1912.

COMPETITIONS.

Banbury Workmen's Dwellings Competition.

The Council of the Institute are of opinion that the conditions of this Competition are very unsatisfactory, but in view of the lateness of the date they do not see their way to inform members that they must not take part in it; but they express the hope that members will refrain from doing so.

Greenock Burgh School Competition.

The Council give notice that Members and Licentiates of the Royal Institute must not take part in this Competition.

Proposed New Parliament Buildings, Winnipeg.

The Government of the Province of Manitoba are advertising for plans for the proposed new Parliament Buildings to be erected in the City of Winnipeg. Copies of the conditions may be had on application to Mr. W. L. Griffith, Permanent Secretary of the High Commissioner for Canada, 17 Victoria Street, S.W.

CHRONICLE.

Art Museums and Picture Galleries.

Mr. Edwin T. Hall [*F.*] will read a Paper on Art Museums and Picture Galleries at the General Meeting of the Institute fixed for the 1st April. The illustrations will include a fine collection of slides specially prepared for the Paper. Mr. Hall's Paper is in substitution of that on "Modern Methods of Construction," which Mr. Dunn is unable to read.

The Licentiateship R.I.B.A.

All applications for election to the class of Licentiates must be in the hands of the Secretary of the Royal Institute by the 30th April 1912. Elections to the Licentiateship may take place up to the end of June next, but as it takes some time to examine the applications it is essential that all the papers be sent in by the above-mentioned date.

Safeguarding National Historic Monuments.

In the admirable volume on the Antiquities of Hertfordshire published about a year ago by the Royal Commission on Historical Monuments in England, the opinion was expressed that powers should be given to a Government Department, working with the assistance of a permanent Advisory Board, in order to act with the necessary promptitude in safeguarding national relics when imperilled. The scheme thus outlined by the Commission has been elaborated in fuller detail by Sir Schomberg McDonnell in a Paper recently read before the Society of Antiquaries. Sir Schomberg McDonnell emphasised the need for organised protective authority by a long list of recent cases in which ancient buildings and other relics of unique interest have been destroyed or ruthlessly mutilated, or have suffered from pure neglect, or sometimes from misapplied generosity. Among the instances of the latter class of misfortune included in Sir Schomberg's list is the "complete restoration" of St. Magnus's Cathedral at Kirkwall in the Orkneys, under the terms of the will of a late Sheriff. In order to minimise such risks for the future Sir Schomberg McDonnell advocates the constitution of a body "which should bear the title of the Advisory Board on Historical Monuments," and "should, when satisfied that any national monument is in danger, represent to the First Commissioner of His Majesty's Works that the custody of it should be assumed by the nation; and that the First Commissioner should thereupon, if he sees fit, move His Majesty to declare, by Order in Council, that the monument in question is a national monument, and is consequently transferred to the custody of the First Commissioner." Sir Schomberg suggests that the Advisory Board should consist of eleven members, including the Chairmen of the three Royal Commissions on Historical Monuments (which will not finish their work for many years yet), the Presidents of the Society of Antiquaries and of the Society of Antiquaries of Scotland, the official heads of the British Museum and the Royal Institute of British Architects, the Inspector of Ancient Monuments, and representatives of the two Archbishops and the Ecclesiastical Commissioners. The Board would derive their information as to where their intervention was needed in the first place from the Inspector of Monuments, who would be aided by local archæological societies or by any other body or person interested in the work.

Proposal for a London Goods Clearing House.

Mr. A. W. Gattie, in a lecture delivered last week at the Institute of Builders on "How to Cheapen Transport," attributed the fact that this country provided itself with only about 25 per cent. of the food consumed to abnormally high transport charges, whereby a system of protection in favour of the foreign producer is encouraged. One of the

first effects of cheap transport would be an increased activity in the home production of articles of food, for there is no good reason why England should not be as capable of producing its food as is Denmark, whence we obtain bacon and butter to the value of millions sterling. Although Germany is our great trade rival, the freight rates in this country are double those of Germany. If a railway goods station is examined, nothing will be found in it which pertains to engineering design. It is furnished with a jumble of sheds dotted over it from one end to the other, and it is too unwieldy and scattered to allow intercommunication of parts. Mr. Gattie therefore advocates the creation of a London goods clearing house, of which the various parts would be in immediate electric intercommunication with each other, to take the place of the seventy-four goods stations in London. In this clearing house any parcel, bale, or load could be taken from any spot and conveyed to any other parts of the building, in some instances in a few seconds and in others in a few minutes.

In comparing the cost of the present methods with the suggested system the lecturer took as an example a load of 100,000 glazed bricks, weighing 345 tons, to be conveyed from Yorkshire to London, a distance of 200 miles, in 50 truck loads having a gross weight of 690 tons. The present charge was 11*s.* 8*d.* a ton, or £201 5*s.*, or, including loading, unloading, and delivery charges, a total of £257. If this load were sent in seven large truck loads the loaded weight of the trucks would be 531 tons only, which, with an increase of speed of the train, would enable a saving of £87 15*s.* 10*d.* to be effected in haulage, while the train would be able to proceed into the clearing house intact, thus obviating the necessity of splitting it up in a shunting yard. The lecturer presented figures which tended to show that the total cost of bringing the bricks from Yorkshire to within two miles of the clearing house would be £142 9*s.* 4*d.*, or a saving of £114 10*s.*, equal to 45 per cent.

At the suggestion of Mr. John Burns, President of the Local Government Board, a preliminary estimate of revenue and expenditure on one year's working of the London Goods Clearing House was submitted to Mr. Edgar Harper, formerly statistical officer of the London County Council, whose report on the scheme showed surplus earnings of between nine and ten millions a year for London alone.

After the reading of the paper Mr. R. S. Ayling [*F.*] described the architectural features of the proposed clearing house.

Reinstatement of Member.

Mr. Harold Edmund Church, of 1A Norland Square, Holland Park Avenue, W., has been reinstated by the Council as an Associate of the Royal Institute.

A National Folk-Museum: Proposed Utilisation of the Crystal Palace and Grounds.

A scheme for the future utilisation of the Crystal Palace and grounds for a National Folk-Museum is suggested by Messrs. Henry Balfour (Pitt Rivers Museum, Oxford), F. A. Bather, D.Sc., F.R.S. (Geological Department, British Museum), W. Ruskin Butterfield (Hastings Museum), Sir Laurence Gomme, F.S.A., A. C. Haddon, D.Sc., F.R.S. (Cambridge), Wm. Evans Hoyle, D.Sc., F.R.S.E. (National Museum of Wales), Count Plunkett [*Hon. A.*], President of the Museums Association of Great Britain and Ireland (National Museum of Science and Art, Dublin), and "Home Counties" (Mr. J. W. Robertson Scott).

The proposal is put forward for the consideration of the Committee appointed to consider and report upon the various schemes for the future utilisation of the Palace, and is urged mainly upon the following grounds :—

(i.) There exists at present no museum in this country illustrating in a comprehensive and educational manner the culture-history, and the modes of life in times past, of the English peoples.

(ii.) The time cannot be far distant when, from the growing dearth of material, a comprehensive national folk-museum will be impossible. Even at the present time it would probably be more difficult to form a folk-museum in England than in any other European country, owing to the relative paucity of objects of a distinctively national character that have survived. It is certain, however, that a large amount of material exists in private hands which would probably be attracted to a well-equipped folk-museum.

(iii.) A national folk-museum would provide a ready means of comparing the conditions of life and the æsthetic perceptions of the people at various former periods with those of the present; and it would illustrate the growth of arts, industries, and appliances, and thus the development of culture in England. It would also emphasise the fact that ordinary men and women are not without their influence upon national culture and characteristics; and we believe it would promote love of country and pride of race.

(iv.) Folk-museums have been established at Stockholm, Christiania, Copenhagen, Helsingfors, Moscow, Berlin, Paris, Budapest, Sarajevo, and elsewhere.

Perhaps the nearest parallel to the museum we have in mind is the Northern Museum at Stockholm, with its offshoot the Open Air Museum of Skansen. The former contains a splendid and representative assemblage of objects illustrating the folk-culture of the Scandinavian peninsula, and comprising all such things as throw light upon the daily life, occupations, and amusements, more especially of the peasantry. The objects are grouped with a view to their appealing most forcibly to the spectator. Thus many of the rooms are fitted out, complete in every detail, to show the appearance of house-interiors of various periods. In other rooms the objects are displayed as developmental series, or to illustrate variation of form or ornament according to locality. Obsolete and fast-disappearing appliances relating to local crafts and industries, and objects bearing on the life and habits of various classes of the community, find a prominent place, such as carved and painted furniture, weaving appliances, ancient drinking bowls, musical instruments, children's toys, folk-jewellery, bridal costumes, and vehicles.

In Skansen a large and diversified tract of land is appropriated to an Open Air Museum. Here a number of ancient cottages and larger houses from various parts of Sweden have been re-erected and completely furnished according to their several kinds. Farm-buildings, church-belfries, mills, Maypoles, and various outdoor relics of a past age have been rescued and placed in appropriate surroundings. A dancing floor has been prepared for the performance of national dances; there is also an open-air theatre, while in spacious enclosures are kept living examples of Swedish mammals and birds.

The proposal, therefore, is to acquire and re-erect in the Crystal Palace grounds ancient buildings from different parts of the kingdom, with scrupulous regard to their original features. We do not seek to violate local sentiment by the removal of buildings from their ancient sites, where there is no danger of their mutilation or demolition, but rather to rescue typical buildings of sufficient merit that would otherwise be destroyed. Needless to say it would be necessary to guard against the incongruous effect that would result from placing in close proximity buildings out of keeping with one another. Much could be done by screening neighbouring buildings with trees, and by taking advantage of inequalities of surface. Some of the houses might have associated with them old-fashioned gardens with appropriate flowers and herbs. The buildings would then be provided with furniture and appliances in accordance with their size and period. It is probable that, if an appeal were made, some of the English counties, and even private individuals, would undertake to supply desirable buildings from their own area. The reservation of some portion of the grounds for our great national sports and pastimes would be quite in keeping with the spirit of a folk-museum, as well as with the traditions of the Crystal Palace. We would further suggest an open-air amphitheatre, sufficiently large for the performance of historical "pageants" and plays, as well as for folk-songs and dances, whose recent revival has aroused great interest and has been accorded an enthusiastic popular reception.

The Crystal Palace itself would serve for the display of developmental series of furniture, pottery, glass, ironwork, textiles, etc., and for collections illustrating the customs, distinctive beliefs, amusements, personal ornaments, inventions, etc., of the English peoples. The ample dimensions of the building would enable some of the collections to be arranged as "interiors"; thus there might be a "Chippendale" room, a "Hepplewhite" room, a "William Morris" room; also a room devoted to the apparatus and methods of producing fire in past times, a room for children's toys and games, a folk-lore room, and so on. It would be especially appropriate if a part of the Crystal Palace could be assigned to collections—ceremonial robes, portraits, personal relics, and the like—relating to the past and present members of our Royal house. If precedent were needed, one can be found in the Royal collections preserved in the Rosenborg Castle at Copenhagen.

Opening out of Southwark Cathedral.

A committee is being formed to consider, and, if possible, carry out, the suggestion published in *The Times* of December 26 that the warehouses and other buildings blocking the view of Southwark Cathedral from the river should be swept away to make room for an embankment and public garden. Mr. Henderson-Livesey's letter, in which the suggestion was originally made, has been warmly endorsed by the Bishop of Southwark and by Archdeacon Taylor. The Bishop, who has now consented to take the chairmanship of the committee, which is expected to be in working order a few weeks hence, in a letter to the *Times* says:

I am glad to find from letters that have been addressed to me—one of them enclosing a cheque for £100 towards the fund when it is opened—that the scheme advocated by Mr. Henderson Livesey and supported by the Archdeacon of Southwark for opening the embankment between the Cathedral and the river is arousing interest and enlisting sympathy.

Nothing has struck me more forcibly about life in South London than the need of open spaces, and, where they have been provided, the excellent way in which they are managed and controlled and the happy use that is made of them. Every one admits that no part of South London needs such an outlet more urgently than the Borough and its neighbourhood.

It seems to me that the scheme put before us with so much ability and sobriety offers a wonderful opportunity of easing off the crowded life lived by the population of this district, of supplying a very real need, but also of enhancing—shall I say restoring?—the picturesqueness of the riverside by London Bridge. May I add without impropriety that if the scheme were realised many others besides ourselves on this side of the river would rejoice to see our Cathedral stand out as one of the beautiful features of that part of our city.

I am often haunted by Matthew Arnold's denunciation of "London, with its unutterable external hideousness, and its internal canker of *publice egestas, privatim opulentia.*" We are, I think, making in our generation our reply to both the charges implied. I most sincerely trust that this scheme for opening out Bankside will appeal, in a sense on both grounds, to the imagination of the public and generous benefactors.

Royal Sanitary Institute: Henry Saxon Snell Prize.

The Henry Saxon Snell Prize in the gift of the Royal Sanitary Institute, consisting of Fifty Guineas and the Silver Medal of the Institute, is offered in the year 1912 for an Essay on "Suggestions for Improvements in the Ventilating, Lighting, Heating, and Water Supply Appliances and Fittings for an Operating Room and its accessory rooms for a General Hospital of 400 Beds (no Students)." Two competitors of different professions or crafts may join in sending in an Essay and Plans. Essays must be sent in not later than 30th August 1912. All particulars may be obtained from the Secretary of the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W.

Burford Priory.

Burford Priory, Oxon., has been purchased by Mr. E. J. Horniman, a member of the London County Council. Colonel B. de Sales La Terriere, the former owner, acquired the estate when the Priory was thought a hopeless ruin. He devoted a year to its restoration, and the work was done with a skill and care that earned the gratitude of antiquarians. The courtyard of the old building figures as the background of Waller's picture, "The Empty Saddle." The picture shows Lord Falk-

land's horse returning to his home—Lord Falkland was then the owner of the estate—after the defeat of King Charles at the Battle of Newbury. The Priory existed in the thirteenth century as an offshoot of the Abbey of Keynsham. The Harman family converted it into a lay residence, and it eventually passed into the hands of Sir Lawrence Tanfield, who was admitted to the Inner Temple in 1597. While Sir Lawrence lived there he entertained James I., and this was commemorated by a great heraldic panel of the Royal Arms, which is in excellent preservation. The most interesting parts of the interior include Lenthal's chimneypiece in the drawing-room, the ceiling dating from the time of Henry VIII., which has been well restored, the staircase, the Gothic arcading of the hall, the great fireplace, and the ceiling of the inner hall. The old chapel, which has not been touched, is connected with the house by cloisters and an upper gallery opening from the drawing-room. In the gardens, bounded by the River Windrush, there are many interesting features. Close to the house is a typical piece of Jacobean garden architecture, one of two summer-houses on the west wall. The Home Farm comprises Kitt's Quarries, from which came much of the stone for the interior of St. Paul's and Westminster Abbey, and a pretty old house which had been a residence of Waller.

The Threatened Old Cottages at Guildford.

The old cottages at Guildford whose threatened demolition was the subject of a letter of protest from the Master of Charterhouse in *The Times* of the 2nd inst. are a block of six cottages which in the opinion of local antiquaries were probably erected in the sixteenth century. They are remarkably fine examples of cottage architecture, although the original timber construction is now concealed by plaster. With their red-tiled roofs, their upper stories projecting over the lower, and the flights of stone steps from the pavement, they are a conspicuous feature of Farnham Road as it approaches the railway station. Several years ago, the Guildford correspondent of *The Times* writes, an agreement was entered into between the Guildford Corporation and the Surrey County Council to effect the widening of Farnham Road, but the part opposite the cottages, which is particularly narrow, was reserved for a future occasion. Some time ago the county authority pressed the Town Council to put in hand the completion of the scheme. Powers were obtained for compulsory purchase and the necessary notices served. It was not until this stage had been reached that any serious agitation was raised for the preservation of the cottages. The matter was before the Town Council at their last meeting, when a letter was received from the National Trust asking the Council to conserve these valuable assets of the town, and urging the widening of the road by the purchase of the property on the opposite side. "We are losing so much of the charm of ancient England," the letter concluded, "that we feel sure you will understand our protest and our real wish to see Guildford on the side of the preservers rather than on the side of the destroyers of beautiful and unique domestic architecture." A similar letter was received from Mr. W. F. Rawnsley, hon. secretary of the West Surrey Society, who urged that, as so much of picturesque Guildford has disappeared, it becomes all the more necessary to use the strongest efforts to preserve what is still left.

At the meeting of the Surrey County Council on the 9th inst. the Chairman of the Highway Committee, Mr. Alderman Pain, gave the assurance that nothing would be done in a hurry, and if found possible to devise means for the preservation of the old cottages, his Committee would offer all facilities in their power for doing so.

The Garden City Movement.

The Garden Cities and Town Planning Association, who are now located in larger and more convenient premises at 3 Gray's Inn Place, W.C., have arranged a programme of classes in order to give practical instruction in "What Town Planning Means," and in order to equip a number of lecturers for popularising the movement. It is proposed to deal with the legal, sociological, architectural, engineering, municipal, financial, and scientific aspects of the question, while the point of view of the private owner of land will be specially dealt with. Particulars of the classes may be obtained from the Secretary. At the Annual Meeting of the Association, to be held at Carpenters' Hall on Monday, February 5, Professor S. D. Adshead [*F.*] will give an address on "The Beautifying of London."

The Carpenters' Company's Lectures, 1912.

The Carpenters' Company are giving a series of lectures on the arts connected with building, as in previous years. The lectures are delivered weekly on Wednesdays at 7.45 p.m., as follows :—

24 Jan. : "The Unity and Difference in Art and Craft," by Mr. Thackeray Turner, F.S.A. [*F.*].

31 Jan. : "London—an Architectural Syllabus," by Professor Beresford Pite [*F.*].

7 Feb. : "Past and Present Conditions of Building," by Mr Herbert W. Wills [*A.*].

14 Feb. : "The Sculptor's Craft" (Demonstrated and Illustrated), by Mr. T. Stirling Lee.

21 Feb. : "Mediæval Sculpture," by Mr. W. H. Bidlake [*A.*].

28 Feb. : "House Building, past and present," by Mr. M. H. Baillie Scott.

6. Mar. : "Form and Vision—with reference to Art," by Mr. W. S. Frith.

13 Mar. : "Roofs and Roofing," by Mr. W. Curtis Green [*F.*].

20 Mar. : "The Craft of the Brick and Tile Maker," by Mr. W. R. Hoare.

27 Mar. : "Influences in the Development of Planning," by Mr. Gerald C. Horsley [*F.*].

The following lectures, also under the auspices of the Carpenters' Company, will be given on Thursdays at 8 :—

15 Feb. : "The Nile in English Harness," by Sir R. Hanbury Brown, K.C.M.G.
22 Feb. : "The English House from the Normans to the Tudors," by Mr. W. H. St. John Hope.
29 Feb. : "The Tower of London," by Mr. Banister F. Fletcher [*F.*].
7 Mar. : "The Folk Lore of London," by Sir Laurence Gomme, F.S.A.
14 Mar. : "J. M. W. Turner, R.A.," by Mr. A. G. Temple, F.S.A.
21 Mar. : "The Forests of North America," by Prof. Wm. Somerville, M.A., D.Sc.

The Company are offering prizes to be competed for by craftsmen or those engaged in the actual work of carpentry, joinery, or the other arts connected with building. The subjects of competition comprise (1) Design for a row of six labourers' cottages ; (2) Design for a Village "Workman's Institute" ; (3) Design for any piece of domestic furniture in any material.

University of London, University College.

Prof. Ernest A. Gardner is announced to give the following course of lectures on "The Visible Surroundings of Greek Life," on Fridays at 2 P.M., beginning 19th January :—

19 Jan. : Greek Cities and Houses; evidence and general conditions.
26 Jan. : Cretan and Mycenæan Palaces.
2 Feb. : The Homeric House.
9 Feb. : The Greek House.
16 Feb. : Public Buildings; Temples, Halls, &c.
23 Feb. : Theatres; Extant Buildings.
1 Mar. : Theatres; Performance of Plays.
8 Mar. : Types of Costumes; Cretan and Mycenæan, Ionic, Doric.
15 Mar. : Greek Dress; normal and special.

The Sootfall of London.

The *Lancet* publishes the results of an investigation which has been made as to the amount, quality, and effects of the soot falling in London. It is calculated that the deposit falling annually upon the Administrative County of London, including the City, amounts, if reckoned on the basis supplied by the soot gauge at the City station, to 76,050 tons.

The experiments (the report states) were conducted at four stations; two were situated in the S.W. district near Westminster, one in the City area, and the fourth on the borders of the metropolitan area at Sutton, in Surrey. The latter station was chosen in order to gain a comparison between the amount and kind of deposit falling in the suburban area and that collected in London itself. The collections were made each month through the year June-May, 1910-11, and a soot gauge was installed at each station, which caught both deposit and rain.

The analysis of these collections was conducted in the *Lancet* laboratory. The results are summarised in a table in which are set out columns showing :— (1) Rain volume; (2) total deposit fallen on an experimental area of 4 square feet (the soot gauge); (3) insoluble deposit (soot, &c.); (4) total solids dissolved in the rain; (5) soluble volatile solids; (6) soluble fixed solids; (7) sulphates; (8) ammonia; (9) chlorine; (10) lime; and (11) calculated total deposit in the Administrative County of London, including the City (117 square miles).

It is pointed out that the last column of figures in the table deals with some stupendous facts. If, for example, the City station is taken as the basis of calculation as to the total amount of deposit falling annually upon the Administrative County of London, including the City, this deposit amounts to no less than 76,050 tons, in which are present over 6,000 tons of ammonia, about 8,000 tons of sulphates, 3,000 tons of chlorine in chlorides, to say nothing of the carbon and tar. Taking the S.W. metropolitan station as a basis, the total deposit per year over the same Administrative area would average 53,820 tons, in which are present over 4,000 tons of ammonia, about 5,000 tons of sulphates, and 4,000 tons of chlorine in chlorides.

The London rainfall in foggy seasons is also distinctly destructive to metal surfaces, as decided traces of tin and lead were found in the specimens examined. According to other figures in the table which refer to the suburban area, people who live there "would appear to enjoy something approaching an immunity from this appalling downpour of chemical substances." The soot gauge discloses in a striking way the defects of the coal fire, and it is urged that such an instrument of observation should be added to the equipment of the meteorological stations of our towns and cities. A measure would thus be gained of the black carbonaceous deposit evolved from the chimney. This deposit is an evidence of faulty combustion and wastage of fuel; it contains products injurious to health, which corrode building fabrics, and which often enough gather in a cloud opaque to the sun's radiations, sometimes reducing thereby day to the darkness of night.

Election of Licentiates.

At the Council Meeting of the 8th January, the following candidates, having been found eligible and qualified under the Charter and By-laws, were elected Licentiates of the Institute in accordance with By-law 12, viz. :—

BINNIE : Peter Frederick (Harpenden).
BLACKBURNE-DANIELL : George Francis (Cairo).
BROADLEY : William Alfred De Laistre (Croydon).
BROOKE : Charles Henry (Leeds).
CANDLER : Henry Troughton.
CAPON : Frank Sizer (Norbury).
CRIMP : Arthur Gerald.
ELLIOT : Norman.
ESCH : Vincent J. (Calcutta).
FLETCHER : Edgar George (Stockton-on-Tees).
FLINN : Henry Ernest (Birkenhead).
GINHAM : Percy Norman.
GRUNDY : Samuel, Junr. (Ulverston).
HYNAM : William.
JACKSON : Thomas Gordon.
JOHNSON : Thomas McCosh (Cardiff).
LEGGETT : Melville Charles Marion (British East Africa).
ODDY : George Reginald (Halifax).
PARKES : Ernest Hadden.
PLAYER : William John.
RODECK : Pieter (Cairo).
SEBLEY : Arthur Arnold.
SIMMONS : Charles Evelyn.

SLATTER : Cyril Hugh.
STREATFEILD : Granville Edward Stewart.
TAIT : Henry Makins (Kimberley).
TAYLOR : Joseph James (Darlington).
TOPOTT : William Thomas (Leicester).
VERGER : Edward Arthur (Winchester).
WALLIS : Ernest John (Thornton Heath).
WITTET : George (Bombay).

Obituary.

JAMES RAWSON CARROLL, of Dublin, whose death is announced, was for twenty-two years a Fellow of the Institute, having been elected in 1876 and resigning in 1908. With his partner, Mr. Frederick Batchelor [*F.*], practising at No. 183 Great Brunswick Street, Dublin, he was the architect of the Richmond Surgical Hospital, in North Brunswick Street, Dublin ; the new buildings for out-patients and 120 in-patients, and with sanitary annexes, to combine under one roof the St. Mark's Ophthalmic Hospital, Lincoln Place ; and the Provincial Banking Company's premises, Belfast ; Limerick Workhouse ; and additions, at a cost of more than £10,000, to the Great Southern Hotel, Killarney, eleven years ago.

GEORGE GORDON HOSKINS, of Darlington, who died on the 12th ult. at the age of seventy-four, was elected Associate of the Institute in 1867, and Fellow in 1870. Educated at private schools in London and Paris, Mr. Hoskins served his pupilage with Mr. W. D. Haskoll, architect, of Westminster. In 1864 he went to Darlington, where his abilities found early recognition, and his work is to be found in every part of the district. His chief work was the Middlesbrough Municipal Buildings and Town Hall, which were erected in 1883 and 1884 at a cost of £120,000. At Darlington some of his works are the Queen Elizabeth Grammar School, the Edward Pease Public Library, the hospital and dispensary, and the fever hospital. He also designed the Hartlepools Exchange at West Hartlepool. Amongst his other works are cemetery chapels and churches at Darlington and South Stockton. Mr. Hoskins was appointed a Darlington Borough Magistrate in 1892, and was elected to the County Bench in 1908. He was for some years Chairman of the Borough Licensing Committee, and member of the Darlington Town Council.

The British Architect.—In commencing its seventy-seventh volume the *British Architect* has slightly changed its form, appearing now on a quarto sheet of more convenient size for handling and binding. The price will be twopence instead of fourpence as hitherto. The publisher's announcement states that the aim of the journal will be to afford a helpful stimulus for the architect and student, and at the same time to serve as a popular record of architectural design which will appeal to the general public. Special articles are promised on "The Home and its Furnishing," "Sculpture in Relation to Architecture," "Suggestive Design," and "Garden Accessories."

The late Monsieur Daumet.

The Secretary of the British Section has received the following letter from the Secretary-General of the Comité Permanent International des Architectes :—

Paris, 24*e Décembre* 1911.

CHER MAÎTRE,—Les Membres de la Section Française du C.P.I.A. ont été profondément touchés par la télégramme que vous avez adressé au sujet du décès de notre regretté Président M. Daumet.

La Famille Daumet a été très sensible à cet hommage adressé à son chef vénéré, et vous en exprime sa cordiale reconnaissance.

Notre cher Président a voulu que ses funérailles soient simples et sans faste. Pour nous conformer à ses dernières volontés "Ni fleurs, ni couronnes, ni discours," nous avons dû renoncer à l'envoi traditionnel ; mais nous tenons à vous remercier de vous être associé en pensée à notre hommage funèbre.

Agréez, je vous prie, cher maître, l'expression de nos meilleurs sentiments.

Le Secrétaire général,
J. M. POUPINEL.

M. John W. Simpson.

THE EXAMINATIONS.

The Final : Alternative Scheme of Testimonies of Study.

In accordance with the notice already published in the *Kalendar*, the alternative Scheme of Testimonies of Study for the Final Examination will come into operation at the option of the candidates in November next, and after the end of the year 1913 the existing Testimonies of Study for this Examination will be abolished. Six alternative Problems in Design will be set by the Board of Architectural Education each year, and candidates for the Final Examination must submit designs in answer to at least four of these problems. These alternative problems will be published twice a year, three sets in *January* and three in *July*. This is done for the convenience of candidates, but it must be distinctly understood that the time for sending in the designs in answer to these problems is strictly limited. Thus the designs for Subject I. must be sent in to the Secretary R.I.B.A. or to the Secretary of the Allied Society for the district in which the candidate is working by 29th February 1912 ; those for Subject II. by 30th April, and those for Subject III. by 30th June. (This time will be extended for students in the Colonies ; see dates following List of Subjects below.)

The drawings must be on imperial sheets.

The Subjects for the first half of the year 1912 are as follows :—

Subject I.

(*a*) A large Monument, to commemorate King Alfred's refounding of London one thousand years

ago, for a public place in the City, not to cover more than 500 superficial feet.

All drawings to be $\frac{1}{2}$ inch scale and shaded.

(*b*) A Terrace of Five Houses 20 feet frontage, each six stories high, including basement, facing the parade of a small watering-place. Detailed construction of one house to be given and a design for the complete terrace.

Drawings required to be $\frac{1}{8}$ inch and $\frac{1}{2}$ inch scale.

Subject II.

(*a*) A large Monument to an Explorer, to be placed against the wall of a public building.

Shaded drawings required to be $\frac{1}{2}$ inch scale.

(*b*) A Cloister with external entrance gateway or tower to a collegiate building round a courtyard 100 feet square.

Drawings to be $\frac{1}{8}$ inch scale, with $\frac{1}{2}$ inch details of the complete construction of one bay.

Subject III.

(*a*) A Detached Ballroom to a large country house, to be connected with the house by a covered way. The decorations should be specially considered.

Shaded drawings to $\frac{1}{2}$ inch scale showing both interior and exterior, and a detail of decorations.

(*b*) A Landing Stage to a river or lake, with a restaurant.

Drawings to show complete construction $\frac{1}{8}$ inch scale and $\frac{1}{2}$ inch.

Dates for Submission of Designs in 1912.

	Subject I.	Subject II.	Subject III.
United Kingdom	29th Feb.	30th April	30th June
Johannesburg	30th April	30th June	31st Aug.
Melbourne	31st May	31st July	30th Sept.
Sydney	31st May	31st July	30th Sept.
Toronto	31st March	31st May	31st July

The Subject of Construction and Shoring: Notice to Masters of Architectural Schools.

The Board of Architectural Education have received a communication from the Examiners to the effect that many of the candidates at recent examinations have shown weakness in the subject of Construction generally and Shoring in particular. They would, therefore, direct the attention of the Masters of the Architectural Schools to the importance of impressing on their Students the necessity of studying more carefully this important branch of architectural education.

MINUTES. V.

At the Fifth General Meeting (Business) of the Session 1911–12, held Monday, 8th January 1912, at 8 P.M.—Present: Mr. Leonard Stokes, *President*, in the Chair; 78 Fellows (including 15 members of Council), 136 Associates (including 5 members of Council)—the Minutes of the Meeting held 18th December 1911, having been printed in the JOURNAL, were taken as read and signed as correct.

Mr. E. Guy Dawber, *Vice-President*, in the absence of the Hon. Secretary, announced the decease of Alexander von Wielemans, of Vienna, *Hon. Corr. Member* elected 1895; James Radford, of Manchester, elected *Associate* 1865, *Fellow* 1872, and placed on the List of *Retired Fellows* in 1900; Franc Sadleir Brereton, *Fellow*, elected 1882; and Sydney Bridges, *Associate*, elected 1906.

The following members, attending for the first time since their election, were formally admitted by the President, viz.: Horace White, Nathaniel William Harrison, Thomas Geoffrey Lucas, *Fellows*; Wilfred Stuart Gorringe, Michael John Tapper, Arthur George Warnham Tickle, Frank Wardel Knight, Hayward Lewis Samson, Francis Holles Bulmer, Laurence Mortimer Angus, Norman Wigzell, *Associates*.

The following candidates were elected by show of hands under By-law 10:—

AS FELLOWS.

NEWMAN: Francis Winton [*A.* 1904, *Ashpitel Prizeman* 1903, *Arthur Cates Prizeman* 1905].

TAPPER: Walter [*A.* 1889].

AS HON. CORR. MEMBER.

LALOUX: Victor Alexandre Frédéric, Architect, Membre de l'Institut, Commandeur de la Légion d'Honneur, Paris.

This concluded the Business Meeting.

At the Special General Meeting summoned by the Council and held Monday, 8th January 1912, at the conclusion of the Business General Meeting above referred to, and similarly constituted, the President formally submitted to the Meeting the draft Agreement proposed to be made between the Royal Institute and the Society of Architects with reference to the admission into the Institute of the Members of the Society.

Mr. J. S. Gibson [*F.*] moved, in the terms of the Resolution printed on the Notice Paper previously issued to all members, "that the Agreement proposed to be made between the Royal Institute and the Society of Architects and which is now submitted to this Meeting be and the same is hereby approved, and that the President be authorised to sign the same on behalf of the Royal Institute, and that after the same shall have been signed by both parties the Council do proceed to carry the same into effect and do present a Petition to His Majesty's Privy Council praying for the grant of a Supplemental Charter with By-laws in the form set out in the Second Schedule to the said Agreement as now approved."

Mr. A. Needham Wilson [*A.*] seconded the Resolution.

Mr. C. Stanley Peach [*F.*] moved as an amendment that the Agreement be referred back to the Council for further consideration.

Mr. Herbert Shepherd [*A.*] seconded the amendment.

In the discussion which ensued the amendment was supported by Mr. Sydney Perks, F.S.A. [*F.*], Mr. W. R. Davidge [*A.*], Mr. G. L. Elkington [*A.*], Professor Beresford Pite [*F.*], and Sir Aston Webb, C.B., C.V.O., R.A. [*F.*], and opposed by Mr. Horace T. Bonner [*A.*].

The President proposing to adjourn the discussion till Monday, 15th January, Mr. R. J. Angel [*F.*] moved, and Mr. W. H. Burt [*A.*] seconded, that the amendment be forthwith put.

The amendment was thereupon put from the Chair, and having been voted upon by show of hands was carried by a large majority.

The proceedings closed and the Meeting separated at 10 p.m.

Architectural Library

Mosaic and Fresco, by Pinturicchio, at S. Maria de. Popolo. (The figure in Fresco, the background in Mosaic.)

COLOUR AS APPLIED TO ARCHITECTURE.

By Sir Alfred East, A.R.A. [*Hon. A.*] and Edgar Wood [*F.*].

Read before the Royal Institute of British Architects, Monday, 22nd January 1912.

I.

By Sir Alfred East.

THE Application of Colour to Architecture may open out channels of thought in which there may be a wide divergence of opinion, and it is the object of the writer to call forth those expressions of opinion which may be useful in the practical experience of those who have the control of such an application. The question of the actual colour of materials used in construction is a very interesting one, and one that is especially interesting to-day, when rapid and economic conditions make it possible for the architect to draw upon the resources of the world for his material. Therefore, in the light of these new conditions, the question assumes a greater significance than at any previous time; and with greater liberty in the use of material, a greater danger of its abuse naturally follows. In the past, when the conditions of transit were more difficult, the builder more frequently used the material he found close at hand. It was cheaper, and he avoided the delay which very primitive means of transit imposed upon him. These difficulties were not in any case a drawback, because he often obtained a feeling of breadth and simplicity of colour which the modern builder, with his great facility of obtaining foreign materials, missed. The former was more likely to express *himself*, and so express the feeling of his time, than his modern *confrère*, who, with the greater choice, might fall into the temptation of selecting some which, although beautiful in themselves, might be unfit and even base when used for the purposes of his building.

It must be remembered that, apart from the principle of scale and other qualities of architecture, the art of retaining the peculiar quality of the material is one of great importance. One cannot accept the imitation of stone, no matter how well done, as convincing as

the mental assurance of the characteristics of stone, any more than one can accept the surface painting which imitates marble as equal to the marble itself. Therefore if the architect wilfully selects the colour of his materials regardless of the claims of position, without taking into consideration the demand made upon him for the consideration of site, or if he ignores all that is peculiar to our national expression, then I think he is not strong enough to be entrusted with the responsibilities of his greater freedom.

I venture to think that the architect who works within the limit marked out for him by local conditions, and succeeds, is in a stronger artistic position than he who, having so large a choice, fails by being too generous. It is surely a greater thing to rouse the feeling of absolute satisfaction by working within the lines that are imperative, and to succeed within those lines, than to ignore them. As, for example, the poet who satisfies you perfectly in the selection of some convention, such as the sonnet form, in which one feels he does not require a line more or less with which to express himself; or the painter who so displays his form and colour upon his canvas that one does not wish to add an inch or subtract one from its area. Still less is decoration governed by the conditions I have spoken of; and still more does this great question rest in the hands of the architect who takes upon himself a further and greater responsibility. We have examples of work done by artists who were foreign to the sentiment of the people in whose midst the building had been erected; and we find that in many instances the work so done does not, and can not, embody either the particular and personal feeling of the architect, or carry on the national artistic spirit. It is unreasonable to expect that any foreign artist could at once be imbued with the same spirit as that which animates the architect who is and should be governed by those peculiar qualities which have formed our school; for the architect, like the painter or poet, expresses an idea in a manner which has been formed by his education and environment. And as no practice of technique can be of any particular nationality—for, like science, technique has no national characteristics—it is its *application* whereby it is used to express the thought and feeling of the man, it is in that application that art is national. But the closer consideration of these causes, these influences, although they are of the deepest interest, lies outside the object of my Paper to-night.

It is interesting to note any building which thoroughly expresses the purpose of its existence. If it is embellished and decorated so that the decoration is the expression of its own time and environment as much as the building itself, it adds to the sense of satisfaction that the building is a completed work: it would convey to one the idea that the same mental outlook pervaded the whole, and that the accomplishment as a whole was eminently satisfactory.

The architect is, or should be, responsible for the absolute completion of any public building, and it is unfair to criticise him if some local authority assumes the responsibility of its decoration. We know the difficulties which surround this question. It may be that the painter does not interest himself sufficiently, and has not been able to identify himself thoroughly, with the aims of the architect; or that the architect approaches the question of decoration with pre-conceived ideas engendered by examples of the past which may be in themselves very beautiful, but totally unfitted for the purpose he has before him. And he may not pay that attention or give the special art of the painter that consideration in the conception of his design which might help him in the realisation of his aim, and which would possibly result in a finer and a more complete work of art. It would be a great step on the way to obtain a perfect and completed scheme if the architect and the painter were brought into more intimate contact, and, by the interchange of ideas, to help each other to understand the peculiar claims of their individual crafts. I would not claim that the architect should be necessarily instructed in the technical qualities of the various methods of painting; nor can it

be expected that the painter should make himself acquainted with the constructive side of architecture; but a knowledge of each of their aims should be mutually understood. It is to be accepted that the sincere architect desires this mutual understanding, and that if the building is to be a monument of his own ability, and also an expression of the art of his day, he should lose no opportunity in taking advantage of anything and everything that he considers would exalt his work and make it worthy of himself and of his time. Every man who works in this spirit feels that there is a serious responsibility placed upon his shoulders. He should feel that the great traditions of architecture he has received should not be avoided or abused. He cannot be so presumptuous as to believe that he is able to abandon them or to substitute for them any new order of his own. He should feel that he must work in the spirit of these traditions, and so adapt them to the requirements of his own purpose. This is more important to him than it is to the painter, for the painter has not committed himself in so large a measure in such imperishable materials as the architect. The work of the painter can be put away and hidden out of sight; and it is only when in collaboration with the architect that his work assumes a monumental character as forming part of a scheme of a permanent building.

It is a source of the greatest satisfaction to see that during the last generation the architect has taken the sculptor more thoroughly into his confidence, and I would like to see the same confidence extended to the painter. For I am under the impression that the place of the mural painting should have been considered by the architect in the creation of his plan, as much as that of the sculptor; neither is required for the actual structural qualities of the building, but both are a necessity for its perfect completeness. I do not think anyone would dispute the assertion that the noblest work of man is the combination of all the arts in perfect fitness; the combination of these arts into a building that would be devoted to, and best adapted for, the expression of the other arts of music or literature. Such a building would not be altogether dominated by the architect, to the exclusion of the sculpture and painting, but would be one that in its completeness was perfectly adapted to the purpose of its creation. Unfortunately, the opportunity of so expressing the unity of the arts is rare. But one such building in any country would mark it as exhibiting the highest understanding of the real purpose of art.

I have spoken of the authority of the architect hitherto because I believe that in all public buildings he should be held responsible for their entire completion; but what shall I say to the architect who designs a private house in which he leaves no place either for sculpture or painting? I think one of the causes of the decline in the purchase of easel pictures arises from the fact that neither the architect nor the commercial decorator ever considers that it is possible for the cultured man to be interested in the arts of painting and sculpture. This custom of "turning out" by the architect of a home ready for occupation may be considered as going outside his province, for he claims an independence for himself which he denies to his client. The dwelling-house should be a place that is absolutely in sympathy with the dweller, it should reflect his peculiar character and pursuits, and we resent the intrusion of the architect or anyone who would in any way destroy that intimate relation.

The fitness of colour for decorative purpose is a question that has never been adjusted by any rule except that rule which is applied equally to the architect and sculptor. The first and most important is the sense of scale. We find in many decorated public buildings that the colour scheme may be satisfactory as a scheme, but that the areas of the different colours employed are not in keeping with the scale of the building. As I have said before, it is the duty of the decorator to work within the conditions laid down by the architect, and the fact that he has done so is itself an artistic expression. But a responsibility rests sometimes with the architect, who may not have considered the space suitable for the work of the painter or sculptor in his design. The great problem of the application of colour to decoration has been

solved in some instances with success; and in every case that success has been achieved by the perfect sympathy of those concerned in its production.

The painter may spoil the work of the architect if there be not that sympathy. For instance, he may have his scale too large, the result being to diminish the dignity of the building. If, on the contrary, his scale be too small, the *raison d'être* of the painting is not secured. This sense of proportion is the first quality the painter has to establish.

It is difficult to speak of colour, since colours bear no definite names. Do not consider it as colour alone—for colour is entirely altered in its decorative quality by the shapes and sizes of its display. A certain arrangement of colour of certain sizes in conjunction may completely destroy the object of the architect, and yet the same series with a different arrangement may be perfectly satisfactory.

The value of colour as a medium of decoration may be considered from this point of view, and another important point is that the forms selected for its display should be such as will best express its peculiar value; thus, it is obvious that any colour expressed in angular forms must convey a different decorative sense from the same colour displayed by rounded forms. Herein lies a very subtle problem for the decorator, and one that has not hitherto been considered in its fullest significance. For we must describe colour by a form, for colour cannot be expressed without form.

All form is expressed by the figures of the straight line and the curve; it necessarily follows that nothing can be expressed without them; it is in the difference of these figures in conjunction that the various orders of architecture or design have their origin. Nothing can be expressed without them, but within the possibilities of their variation lies a field that no man yet has exhausted. We have accepted the conjunction which expresses various orders of architecture, and have accepted such orders as standards because they are governed by conditions created by their own demands; we have associated the conjunction of straight lines, the simplest figure possible having the triangle as a symbol, not only because it is the simplest figure possible in the use of lines, but because it is suggestive of something which lies outside, and points to the outside and beyond. The curve, on the contrary, completes its figure alone; the circle it describes is associated with completed things, and is materialistic. The incomplete always suggests possibilities; the complete is final. Bearing in mind the association with these primitive figures, we at once see their influence upon architecture. Thus the Greek expressed the intellectuality of the right angle which suggested and is the dominant figure of that order.

Other orders gave us the more opulent feeling associated with the curve, and so became associated with the secular architecture, while the Gothic embraced the qualities of both the human feeling of the curve in conjunction with the angle. I quote these expressions of line and curve because I wish to suggest that in mural painting their association should be supported; and that the painter should not endanger the object he has in view by selecting such forms as are totally unfit to express a conjunction of colour or to support the mental impression aroused by the architecture. As I have said, he must not only discover what form will best express each individual colour, but be conscious of the difference of effect of these forms when brought into conjunction. It can be readily understood that one colour may be fine in quality alone, but, brought into contact with others, may be discordant; not only that, but in their conjunction he may lose the peculiar value of an individual colour by the dominancy of another in juxtaposition. He may, if he be strong enough, so ennoble the building by the use of his forms of colour that if in a Gothic church they may elevate the mind supporting the sentiment of the Gothic form, or if in a secular building be so arranged as to express the wealth and dignity of the city whose history it represents.

The question arises, naturally—what is the best form, the most suitable form, by which

we may display a particular colour at its best? That is a difficult question to answer, and if it is a difficult one in a single instance, how much more difficult and complex does it become when there are several colours to be placed in conjunction! and, after solving this problem, as far as colour is concerned, we have then to consider if the conjunction of colour we have accepted is such as will conform to the special conditions of the building to be decorated. This is a difficulty, and one that may be presented to the painter with varying results, according to the conditions presented by each particular building. He has to consider the masses and details of such a building to be decorated; his decoration should be so sensitive that it should support not only the larger masses of the structure, but each detail by which the architect has himself embellished his structure. He must be as sensitive as the architect in sustaining the purpose of its being; he must not in any way destroy or warp such an object; he has no right to take away the knowledge that there is a surface on which his painting is superimposed, or remove by some optical illusion any structural quality of the building which is necessary for its support. All these things he has to consider, and if he were a great decorator he would consider them; but if he be a victim of some local authority who dictates to him what he shall do or how he shall do it, then failure is certain.

The full value of decoration is often marred by the intervention of some outside authority, who is frequently moved more by the object of illustrating the history of the town or church than the considerations of fine decoration; and it is unfair both to the painter and the architect to have the *ensemble* spoiled by the insistence of the illustration of some incident that cannot conform to the purpose of decoration. The liberty extended to the painter is put to the test if he is obliged to accept the task of illustrating some particular period of local history; he may so arrange the contours and quantities of colour that the decorative end may be secured. He ought to bear in mind that the *carrying* power of his composition should be such that it is seen at its best from a point of view that includes also the best point of view of the architectural features which surround it; this is another problem for his consideration, and one can conceive that, of two panels equally satisfactory as illustrating the interesting local history, one may be a help and another a hindrance to the feeling of completion which all decoration is designed to obtain.

We have considered the importance of selecting the forms which will best display the colour, and that these forms of different contours and of different quantities should be such that their influence upon each other should be just. We can imagine a design for a decoration in which the dominant colour cannot be displayed on account of considerations of the subject. He has then to consider the problem from another point of view—he may have so to arrange his colours that, by their juxtaposition, he may be able to convey the impression that the dominant note is sustained. We find that in some of the works of Turner, who had a sensitive appreciation of the decorative arrangement of his material (which, in the language of the painter, is called good composition), he sometimes makes a very curious and interesting departure from the literal truth of nature to obtain a greater expression of it. In some cases, when he has not been able to give a sufficiently large area to balance his composition, he has placed a point of smaller dimensions with increased strength, and so, by that means, a sense of completeness is obtained. This fact may be useful to the decorator.

The weight or intensity of colour should be also just of that strength that helps the purpose. How often the opposite fact is revealed in the work that we see in some of the buildings of to-day!

I have pointed out the difficulties of the mural painter; and where the building has no history to record on its walls, but reserves its history for its literature, he might be asked if it were not possible to satisfy the claims of the architect if he substituted decorative landscape in place of the illustration of an incident. It would give the painter

a wider scope for a more personal expression, and he would be free from the conditions that so often make decoration a failure, for his materials are more at his discretion, both in form and colour, and, if he succeed, he will not fall into the difficulty of attracting unduly the attention of the spectator from the beauty of the architecture. I have known decorations which would, by their dominancy, suggest that the whole effort of the architect was to furnish him with a setting for his picture, whereas it should be considered from an entirely opposite point of view. And, in conclusion, I would appeal to those who have the responsibility of designing a great public building to bear in mind the conditions which must govern the mural painter, and, on the other hand, to the mural painter to consider that the architect has a right to expect that he should be supported in his architectural ideal.

II.

By Edgar Wood [*F.*].

THE subject of Colour Decoration is one that drags with a wide net: yet, with all its inherent value and necessity, with much of its most important scope and result, it is not one that readily comes with the expression by words; the very names of simple colours express but inadequately the sensation and the effects which they themselves convey to us; and still more is it impossible to convey the combinations that colour has been made to serve.

I have questioned what can be said upon such a subject. *In vision* the subject is so vast: examples come crowding upon the memory, great impressions of the works of the past appear before us in a continuous abstract sensation of indelible memories. But how should one express them, or make them yield anything that can be interpreted by words that may justify record or be of advantage to anyone? Can one discuss or voice those things whose very essence and inherent qualities defy language and refuse to be other than what they are, something nameless, meaning nothing, but imperative for our emotional completeness and craving?

In thoughts upon colour one's mind unconsciously is drawn to where colour has received its greatest development and its greatest achievement as colour, where it has produced its most powerful appeals; and so it is to the East that we immediately turn and dwell upon and enjoy. Again, wherever we are, wherever we have been arrested by a beautiful colour scheme, even here in the remoteness of our own country, upon examination we shall in all probability discover that in the majority of cases it owes its origin to the East, that the essence of it is not of our making, but that it has percolated through many ages, many adaptations, many human contrivances: yet still its original germ has only been manipulated and never entirely destroyed. Its intensity of appeal has been so convincing that it has survived all the processes of adoption and use, and its original foreign vitality still remains its strongest attraction.

So if colour has been so powerfully endowed in the somewhat lowly province of pattern one is inclined to turn to seek out what its career has been in the greater and broader scope of architectural embellishment, and we shall find that in this direction it has lost little of that same pertinacity that was noted in its smaller path; it has come, it has seen, and it has conquered.

A comparison between the Greek or Gothic use of colour with that of the East resolves itself into a conflict between two opposing and antagonistic expressions—the expression of form and the appeal of colour, antagonistic because they represent two irreconcilable intentions. Colour is emotional, appealing to us by its emotional and sensuous

faculties; it comes to us before form, representing nothing in itself, dependent upon the emotional feeling it produces and its rightful appeal to sensuous sensibility, whilst form is intellectual and its appeal is the outcome of reason.

Greek work as known to us is restrained on the emotional side, nor has it any touch of mysticism; this was always secondary to form, just as music was subordinate to poetry in songs. This tendency fitted in naturally with the general character of Greek art; its definiteness and its intellectuality produced the most subtle appreciation of form, which has scarcely been reached by the most gifted nations of modern times. And so, where the Greek used colour, he used it merely to define and accentuate that form—that is, he used it *decoratively*, subordinate to shape and limited to outline. And so again with Gothic art it was freely used to decorate wall surfaces, mouldings, and architectural features, sculpture and carved ornaments being richly and brilliantly coloured, but always with the full intent that form should still retain the dominant position; colour never encroached upon or was permitted to invade the province of structural expression.

In the East this is entirely the reverse; the emotional instinct proved too strong, and all is sacrificed and surrendered in order that colour may become the all-powerful appeal, for the very essence of the East consists in two dominant distinctions. Colour is there used for colour alone; it is not only richer, more powerful, more intense, but is convincing and satisfying by the quality of colour alone. In their hands it leaves no void of unfulfilment in its directness and intensity of appeal; it is vital colour, leaving the impression of colour as distinct from things coloured. Thus, again, it is not used merely to define the shape and object of things; this great reversion was accomplished by the assistance and employment of light and shade, by which form was so lost, so controlled, that it not only relinquished its ascendency but immediately became sufficiently pliable as to be dependent upon the power of this triumphant colour supremacy.

It was thus that the famous colourists employed their great emotional appeal, and of which Venice is rich in its illustration. We recognise it amongst its painters, where the colour and glow of a Titian and a Tintoretto are precisely the same in purpose as the interior of the great basilica of St. Mark's, where architraves, cornices, pediments, pilasters, and all the paraphernalia of form disappear, and the interior discovers itself out of plastic masses of soft and ductile gold mosaic, rounded, undulating, drawn up into hollow domes, melting one into another, obscured by dark shadows, suffusing away all form, inlaid with richly coloured figures which again come and go, colour embedded in chiaroscuro, successful in its object of subduing the limitations of form that its own superb and gorgeous magnificence may be revealed without rival or interference.

Turning to domestic work, one problem that all architects have to consider is the right or the best treatment of the walls that will assist the easel picture, or, as some would say, to minimise the defects of the same. It is often the problem of combining two distinct and conflicting principles. For it is the instinctive desire of all dealing with structure to give their work a lasting and permanent effect, to avoid any sense of detachment, unfixedness or looseness, that the line shall be drawn sharply and logically between structure and portability, and that the dominant note shall always be that of structure, reducing as far as possible the degree and extent of the moveable, and when this sentiment is considered with the main features of structure such as the walls and ceiling it finds its strongest outlet; the imperative quality of substantiality is instinctively guarded with more than jealous necessity. It is here that the architect has exercised his faculties to express not only that his walls shall be strong, but look so; he loses no opportunity of impressing the imagination with the stability of his fabric, and so even window and door openings, which might produce local diminution of strength, are taken advantage of and made to show and even to accentuate the thickness of his walls whereby

the sense of strength may be increased and intensified. Pilasters, piers, chimney-breasts, etc., are often introduced and treated with the same unconscious object. That a wall shall be firstly a wall and always a wall and nothing else, neither temporary nor scenic effect should encroach upon the fundamental and imperative sense of security of structure; it is to retain this that constitutes the real difficulty, for the introduction of the easel picture undoubtedly tends to destroy largely this mural strength, not only by its sense of portability, but often again by its subject, and more often its treatment of the subject.

Scale affects the result naturally, but that is only a question of degree; the objectionable results of pictures and frames being out of proportion to their spaces and walls is only an accentuation of the difficulty.

Many, I know, consider and urge that all this is only a question of treatment and that the easel picture properly considered and placed in its right relationship to its surroundings by judicious treatment and hanging may be the acme of decoration, that its relation to a scheme of decoration may be like that of a jewel in a dress. But is this comparison a convincing one?—the jewel in such positions is logical with the dress and wearer because all are portable.

That thoughtful consideration in hanging, framing, and fixing, can minimise much of the objection is admitted, as is shown in some of the rooms of the Ducal Palace at Venice and also in those of the Vatican; but, however well marked, there still remains sufficient of the difference of aim and habit of mind of the two intentions, of the fixed aim of the architect or constructor and the divorced and isolated thought of the painter.

The want or absence of this relationship of the easel picture to the conscious decoration of which all schemes of design consist, and which also extends to the portable furniture, does not preclude its relationship elsewhere, as it must be related to something; if a sincere work it is related to something in the painter's mind, and again it is related to the studio, but it is impossible that it can be related to the walls, and rarely is it related to the decoration.

Mr. Walter Crane, to whom I am indebted for some of the ideas I have endeavoured to express, says in his *Ideals in Art*: "The portability of the easel picture has much to do with its unrelatable character." "Destined for nowhere in particular, as a rule it goes out on tour—a member of a performing and often very diverse company"; and Mr. Furst says, "The painters often resemble tailors making clothes which are not ordered and do not fit but accidentally."

The walls of the Royal Academy, whatever else they may be, are not decorative; wanting often in focus, they are in themselves too charged with continuous interest produced by the effect of so many pictures of so many different sorts, subject and scales and treatment fitted together, which has the same restless result as a surfeit of crowded ornament of internal decoration; they are, in consequence, wanting in the true decorative expression, which lies more in the sense of proportion, arrangement, and distribution than in the repeating use of ornamental units, exemplifying that decorative effect may be destroyed by the very means of decoration.

Though the word "decoration" is frequently used, it is difficult, if not impossible, to actually define its limitation; it is, in consequence, employed in many and distinctly different ways, and certainly to many paintings of very different treatment. It is generally accepted as embodying a simplifying of masses, a flatness of treatment, a tendency to absence of shadow, confinement to simple planes, careful composition in the proportionable filling of space, all combined with architectural dignity of design and structural feeling by form and line, producing a mural feeling and a mural rest.

I can think of no stronger guidance to decorative effect than the influence upon the painter of the walls themselves, provided he will allow their unconscious appeal its full scope by executing the work upon the site.

The argument that easel pictures, however realistic, are in this respect no different from the effect of what is seen through windows, and can be only a repeat or multiplication of the same, would be perhaps answered by the fact that windows which are intended for exterior prospects are not always helps but rather destroyers of ideal decorative effects, and the most successful lighting is when the source is high and concealed; and then again most architects guard against the too realistic effect of window views by the treatment of their glass areas, such as limiting them by divisions of wood or metal so that the sense of opening shall be kept within scale and the architectural sense shall always be dominant; the unbroken plate-glass area of large unproportioned dimensions has ever been the horror of the decorative temperament.

The Japanese method of showing one picture at a time is only a mitigation of the objection, and assists the problem but little, as the Japanese surroundings themselves are not so antagonistic to portability, being often themselves composed of movables having but little structural quality.

My own preference is towards the judicious employment of drapery as frequently offering a satisfactory compromise, the principle based upon the acceptance contained in the dress and jewel suggestion. The drapery can be rich or simple according to what it has to receive, never too rich as to overpower the picture to which it serves as a background, and never too simple as not to sustain the interest that the picture creates. Much, again, will depend upon the character of the drapery in respect to the weight of the folds that it will in itself form by the weight of its own material and hanging, and this, again, would be controlled by the size and scale of the pictures and their gold frames. Again, if the drapery is made subordinate to the wall by being arranged so that portions of the wall appear preferably at the angles and the upper parts, it will have the effect of partially framing it. The structural or mural feeling is then retained, and the sense of picture portability is lessened by being echoed by the drapery. Existing walls can often be treated in this way, but in new work the intention to employ drapery would be especially considered. The drapery itself, I find, also adds considerably to the look of comfort in a room, but in its selection, as in all treatments, it must always be remembered that it has not only to receive pictures, but, what is more important, it has also to serve as a background for the living and their dresses.

For water-colours in white mounts it is difficult as a general principle to depart from the accepted treatment of light backgrounds; as white mounts clean up the water-colours, so does the light wall treatment, and though it has been said that white is the refuge of the destitute, that should not be set against the principle but only against its commonplace treatment. White I still consider as being capable of exquisite and delicate results—in fact, it demands it; one has only to recall what it has done for pottery and tile, for embroidery and for fabric, or the suggestion conveyed in its background for flowers, all of which give it a position that distinctly places it above any taint and beyond any possible effort of the destitute.

We are often given the precept that Nature should be our guide, not only in form but in colour; it is a safe thing to say, but it is a generality that is separated very greatly from the work of man. All designers recognise that, until that separation is a distant one, their work never appears convincing; it is not probably until the original source has become so separated or lost that the result appears to conform or fit the new surroundings of which they are intended to form or become a part. I think this is the experience of all designers—not only those that seek for form, but also those working in colour. That general principles can be gathered from Nature I can understand; the principle of quantities, reliable ideas of tone, and, above all, quality of colour can be learnt and remembered and be made of service. I think historic colour development shows that Nature-study has been the source

from which these principles have come, and so, in consequence, the colourist whose materials of expression have been drawn from landscape comes to the work of decoration with perhaps an unconscious but certainly a valuable asset for the work.

But outside the question of guidance, either of Nature or reason, it is man's work that is most interesting to man. Percy Gardner writes, "What is accurate to Nature leaves the mind unimpressed and the heart cold, unless there shine through it something which is in relation to human life and activity."

Man appeals to man; his work is paramount—interesting not merely from its source, its development, its interpretation, in its final result, but principally because from man it is the outcome, and therefore, however beautiful or costly the materials may be, whether wood, metal, or marble, the materials themselves are not the dominant note which makes the strongest appeal to our intellectual attention. It is in the addition that the human brain and endeavour have supplied that we unconsciously seek for our permanent satisfaction, and so it must follow as a general principle that the greatest accent, the main focus, of any total must and should be given to those parts that contain the largest proportion of human expression, when the material of nature becomes subordinate and is surpassed by the brain and the creation of man.

For instance, marble is one of the most beautiful materials that Nature has provided for our service; its never-repeating vein-markings, its beautiful and variegated colour alone will always insure its prominent place in the aristocracy of craft; but it never has by its inherent qualities alone competed with the best of man's contribution in its æsthetic appeal; in decorative effect, however skilfully employed, it will never give the same convincing satisfaction that human effort has given us when he contributes the painted wall; and, again, mosaic will ever make a stronger appeal than even marble, because in its results it permits of a greater proportion and display of the human faculty.

Nature's materials have to be made subordinate to the work of man; marble, metal, wood, and fabric, however exquisite in themselves, may frame the outcome of man's hand and brain, but in no monumental or successful total can they ever entirely supply its place. Compromise is natural in all its various methods, according to the circumstances of the different problems to be solved, but this general principle will be found to have consciously or unconsciously asserted itself in all work where richness, interest, accent, or focus is felt to be necessary; that result has always been most successfully attained by the greatest concentration of human endeavour and human expression, and it is here that colour, often alone, or in companionship with form, becomes of such superlative value, for rarely, if ever, does Nature in her materials supply us with the richness and the adaptability of the painter's palette for the embellishment of the east end of devotional buildings, the reredos and the altar, the throne of the palace, the fire of the home, the niche—all serve for the complete and supreme manifestation of human intellect through form and colour.

In thoughts upon the use of colour there is always to be remembered, though all-important the form and shape that an architect has given to his work, that the surface alone derived from it always represents a large area, and all surface means colour, either of material or applied, and therefore the treatment of it remembered as quantity alone has an importance that should justify the architect in his legitimate desire to control the decoration. Such a logical conclusion is not always admitted, and, often at the risk of being considered busybodies, architects have continually to guard and defend their creations against the aggressive attacks of the trade decorators, often supported by the habit of custom engendered in the client.

There is often also a strong hesitation and reluctance on the part of the layman, sometimes shared by architects, to apply colour to hard woods, especially oak, largely upon the ground of being guilty of sacrilege, or that the patron has paid for oak perhaps at some sacrifice

which he hopes to recoup by the future pride of its possession, but which when the wood is obliterated by colour and gold is denied him. Charity forces us to admit that such a sentiment is human, but it fails to convince the colourist, who only sees his final aim curtailed in its crowning result. The failure to realise that hard wood may be employed for durability alone, and therefore is especially suitable and worthy of receiving skilled and careful colour treatment, has, I fear, often deprived us of what would otherwise have been valuable additions to our colour possessions and our colour enjoyment.

I think what architects have to ask themselves is: Have they fully utilised the opportunities of colour in their work? Has this valuable and important sense received its legitimate appeal in their completed results?

I have the impression that colour of an enduring type, decoration even of an intending permanency, is still the unfortunate exception, not only in domestic work, which can be partially excused by existing social conditions, but in our public and devotional buildings, where no such conditions exist. I not only recall the absence of great mural decorations, from which these buildings have lost the occasion of a great appeal and the opportunity of a great impression, but the same absence of colour and of pleasure in colour is also felt in the minor surroundings. The many exhibits in our museums alone recall the numerous opportunities which previous generations never neglected, by which their appreciation of and natural desire for colour found an outlet; to them monumental and decorative colour appeared as necessary as useful form; one was incomplete unaccompanied by the other. The roofs, the reredos, the altar, the font, the furniture, the chair, the chest, whatever the subject, was seldom complete—an evidence that form, however perfectly rendered, was not sufficient in itself to satisfy.

Pardon me if I would dare to suggest that, when future funds will permit, even these our walls might more clearly indicate that the possessors have no permanent intention to be satisfied with the security of fashion, but are prepared by example to show that their appreciation of mural colouring corresponds with the distinction of their calling.

The passing away of heraldry and the needful use of armorial bearings is unfortunately depriving us of one useful and decorative source of colour, often the only *motif* and opportunity of relief which was given to the past, and it is difficult and often impossible to supply the place of that jewelled touch of rich colour which was yielded by its requisite purpose.

In seeking the reason why the painters should have deserted us, thoughts turn upon possible causes. It is disconcerting to believe that our productions are so uninteresting and so dull that they fail to attract the painter and he feels that they offer no scope for his craft and his contribution, or that it can be the plea of economy which intervenes when we remember the expenditure on the so-called architectural features and enrichments which would pay for permanent decoration of a high order, not once, but more.

Or is the cause to be sought in the changed disposition of our patrons? have they lost the desire to see and to have contact with simplicity and great scale decoration dignified by permanency of noble thought and intention, by which the genius of the painter may be encouraged to develop his special faculty and contribute enduring records of the ideals of human conduct and attainments, subjects of emulation that may stimulate our æsthetic and intellectual progress?

Have the painters deserted us because they have other and better things to do; is it that decorative art has become the poor relation, and they have forgotten that "the best sculpture yet produced has been the decoration of a temple front, the best painting the decoration of a room," that portable art expressed by the easel picture, "independent of all place—to-day over the sideboard, to-morrow between the windows,"—can never supplant in importance the

work of a fixed position? The more they are portable the more they become unsuitable; their offence often increases with their merit of realism.

In the work the painters have given themselves to do we readily testify to their unqualified progress, but they are as "where the flowers and fruits of the intellect abound, but it is the abundance of a jungle, not of a garden." Continuously, when seeing their wonderful productions, their technical skill, their developed sight, their exquisite subtleties, we forget that we are architects with decorative ideals who crave and seek that skill and genius for the completion and embellishment of our efforts. They force us to reflect that, had the same search and earnestness been only applied to decoration, what a gain it would have been to our interiors, and, I think, to themselves—an opinion evidently held by Ford Madox Brown when he wrote, "It only remains for one to point to the fact that mural painting, where it has been practised jointly by those who were at the same time easel painters, has invariably raised those painters to far higher flights and instances of style than they seem capable of in the smaller path. Take the examples left us, say, by Raphael and Michelangelo, or some of the earlier masters, such as the 'Fulminati' of Signorelli, compared with his specimens in our National Gallery, or the works left on walls by even less favoured artists, such as Domenichino and Andrea del Sarto, or the French De la Roche's 'Hemicycle,' or our own great painters Dyce and Maclise's frescoes; the same rise in style. the same improvement is everywhere to be noticed, both in drawing, in colour, and in flesh painting."

In conclusion, greatly as architects should regret this disastrous separation of painters from architecture, there lies beyond the cause of it; the endeavour on our part should be to neglect no opportunities that may influence to bring back the painter to our assistance, that the art of great decoration shall be, so far as we are able, a neglected craft no more, but shall continue to embellish our efforts of the future as it has jewelled and crowned others of the past.

Note.—It may be useful to mention that the subject of Colour in its relation to Form was very fully treated by Mr. March Phillips in his contributions to the *Contemporary Review* a few years ago.—E. W.

DISCUSSION.

Mr. Leonard Stokes, *President*, in the Chair.

Professor GERALD MOIRA [*Hon. A.*], proposing a vote of thanks to the authors of the Papers, said: There is very little one can say after listening to the breezy teaching of Sir Alfred East and the brilliant literature of Mr. Edgar Wood. Personally I feel that I would far rather do something than say it, for it would be so much easier. One thing I enjoyed enormously about Sir Alfred East's paper: he spoke for his own job. Certainly I think that all landscape painting, when carried out in the manner which Sir Alfred has shown us, is the most beautiful decoration. I feel that to-day more mural work is being done than at any other point in the history of our time, and I am sure that we owe a great deal to the architects in this respect. But their greatest difficulty, as most of us know who have to deal with them, is the question of the length of their clients' purse; and if we can only club together and arrange to do things perhaps a little more economically, we shall get work done that will make the Fifth Georgian era very interesting in the future.

Mr. J. D. CRACE, F.S.A. [*Hon. A.*], in seconding the vote of thanks said: We have listened to two interesting Papers, and naturally they call up many ways of looking at subjects already most interesting in themselves. As regards the architectural

side of the question, both lecturers expressed the desire of the painters and architects to sympathise with each other, and that is undoubtedly what is necessary. But there are two or three sorts of sympathy. There is very platonic sympathy, there is real and genuine sympathy, and there is helpful sympathy. I am reminded of the anecdote of the officer who, walking along the street, ran against a man who was selling buns and recognised in him an old brother-officer who had come down in the world. "Can this be you?" he asked. "Oh, yes, it's me right enough," said the other. "Then allow me to express my sincerest sympathy," said the first. "Damn your sympathy," said the man vending cakes; "buy a bun!" Architects on their side have a little of the feeling of this bun-seller. What architects want in decoration is not so much subtlety in the subject of the mural painting as that the spirit of their architecture should be expressed. The great difficulty is that the modern English painter is not sufficiently versed in architecture to understand what the architect is longing for. Naturally the architect is very unwilling to have his architectural effort destroyed by the distribution of colour in the wrong place, and I notice that Sir Alfred East spoke of the provision by architects of spaces for the decorative painter. But the decorative painter really has the building itself for a space, and the great desideratum is that he should select for his colour such distribution as will express the constructive form and accept the spaces which the architect would naturally distribute, using them in such a way as also to express the structural form. In the execution of the mural painting itself there is much to be borne in mind, especially with regard to the architectural aspect of the work. If we take the period between the years 1300 and 1600 we shall find that the old painters who worked in those centuries never left a picture alone on the wall. It was always supported by such accessories as would weld it into the building itself. That is a point which appears to be entirely overlooked by the modern painter. The colour was distributed in such a way as to lead the eye to the architectural structure as well as to the work of art. The work of art became the jewel of the whole building, and the scheme of decoration, as I may call it, became a part of the building itself. In order to illustrate my point, I have brought with me the reproductions of some famous old pictures used for mural decoration. Here is one, the work of Giotto, and it will be seen that the artist has welded the whole thing together by means of bands of ornament and colour which at once give a feeling of solidity to the work, and instead of leaving the pictures to destroy the sense of surface these bands of ornament around the work themselves illustrate that plane surface which the architect feels it so essential should be expressed. Then if we skip over a century or so we come again to an instance where, a large surface having to be painted, architecture was made use of in the painting itself to convey the idea of stability, and the grouping of the figures was related to an architectural setting. The architectural setting of the painting prevented the large area of pictorial subject from becoming a sort of hole in the wall and destroying the sense of solidity. Here, again, is a Pinturicchio fresco, demanding something more than mere skill in placing. It was necessary to colour it so that the whole building became the picture. From the ground to the ceiling the entire decoration is treated in relation to the architecture. Here is a fresco of Signorelli's. It will be seen at once that the pilasters and columns which were introduced made the fresco a part of the architecture of the building. Of course, the decoration was not limited to that particular area of composition, but it was extended to other parts of the building. The colour was carried up the ribs of the roof, and the lower part of the wall was painted with ornament and with large medallions, and nothing was left to suggest the isolated picture let into the wall.* Our painters may have sympathy with us as architects, but until they keep always in mind the expression of the architecture of the building in some such way as this, that sympathy will never be quite real.

Mr. H. HEATHCOTE STATHAM [*F.*] said: While entirely supporting the vote of thanks for these two most interesting Papers, I think that the basis of discussion might well have been a consideration of the colour of the architectural materials themselves—a matter which in the present day is much neglected. We are too often content to erect buildings in monochrome when we might have the effect of colour by the use of various colour materials. That is, of course, a much less intellectual side of the question than the one to which we have listened this evening, but from the point of view of architecture it is very important. But the special reason for my rising is

* See p. 207 for list of illustrations shown by Mr. Crace to illustrate his point.

because I think there is an inclination to depreciate most unjustly what is called the easel picture. At present we make a very confused use of the word "decorative." We used to think that a decorative painting was one which was treated rather flatly and in a somewhat conventional manner in order not to quarrel with the idea that the surface on which it was painted was a wall. Now we have people telling us that all painting is decorative painting. It is true that all pictures must be designed so as to have a harmony of line. Landscape is distinctly decorative in that sense. But there is a distinction between the decorative painting properly so called and painting which depends upon itself. The painting which depends upon itself is often one of the greatest efforts in art. Take a work which I look upon as perhaps the finest in the National Gallery—Titian's "Bacchus and Ariadne." Is that a decorative picture in the ordinary sense? I say that it is not. It is a splendid piece of colour, but it has the power to assert itself independently of its surroundings. If I possessed the "Bacchus and Ariadne," I would not care against what surroundings it showed itself. Again, take Corot's landscapes. Are not these poems in themselves? I think it is undervaluing the great art of painting to represent it as if it only came to its highest when it is conventionalised to its surroundings. The name of Madox Brown has been mentioned this evening. Brown's best work, in my opinion, is by no means his mural painting on the walls of the Manchester Town Hall, but his easel picture the "Last of England," at present in the Tate Gallery. Painting, I repeat, has a claim for itself, apart from being merely decorative. I quite agree that the finest decoration it is possible to have for a building is the mural decoration, but as long as it is decoration it is necessary to give up something in the painting, otherwise it will clash with the architecture. Among the landscapes at the Salon—and I think that the French are foremost in landscape painting—it is possible to find a distinct difference between those landscapes which are treated decoratively and those which are not. In the last Salon, for example, there was Calve's "Harmonie du Soir," a noble landscape, simply and broadly treated, with no details which I should have called decorative. But we do want landscapes sometimes which, without being realistic, show something of the effect of Nature, and the more they show the effect of Nature the more they get away from architectural surroundings. Painting has its own rights and cannot be reduced merely to the decoration of buildings. If it is to harmonise with architecture it must give up something of itself. I do not think the easel picture should be sneered at merely because, as Mr. Wood says, it can be carried about anywhere.

Mr. H. G. IBBERSON [*F.*]: I should like to be allowed to associate myself very heartily in the vote of thanks to both speakers and to refer briefly to the paper by Sir Alfred East. This to me divided itself into two parts, a part I understood and a part I didn't! The part referring to the necessity of the architect bearing the painter in mind from the first seemed almost familiar. The part in which he told us that certain colours suggested certain forms, and that certain forms suggested certain emotions, was to me (in the way he put it) quite new. I desired more of those illuminating practical instances which he seems expressly to have avoided. What form does red suggest? To me it suggests only a form of political activity with which I am in imperfect sympathy! And if, as Sir Alfred states, a curved line is associated with material things and straight lines with infinity, ought we not to seat our President, who may be said to typify spirituality, in the adjoining room with a *flat* ceiling, and have our cakes and ale in this, where it is curved?

Sir ALFRED EAST, in replying to the vote of thanks, said: I must thank Mr. Statham for his defence of easel pictures; I defend them myself also, for, being a painter, I feel it my privilege as well as my duty to do so, and I do not object to any other craftsman taking the same course: therefore I strongly disagree with Mr. Wood, who seems to think that the easel picture is not a suitable decoration for a house because it lacks the architectural quality of permanency and can be moved from one part of the house to another. Would he condemn tapestries, mirrors, porcelain, &c. for the same reason? for these also are capable of removal from the walls they decorate. What of books? Would he discard them? He seems to think that a fine picture has no other object to serve but as a decoration. Are we to rule out books also on account of their impermanency? I think we should not care to live in a house, no matter how architecturally perfect, if we were deprived of art and literature.

MR. EDGAR WOOD, in reply, said: I was interested in Mr. Crace's contribution with regard to the frame of the picture in wall decoration, and I quite agree that these things are considerably assisted by the treatment of the frame, although some of the frames he has shown us, employing pilasters and pillars for borders, are not quite logical in their treatment. With regard to the remarks upon the easel picture, these may have their rightful place. The position of the painted altar pictures justifies such an opinion and indicates their scope. But the greater and more successful employment of the painter's contributions is where they become an inseparable part of a whole from the commencement of their original conception, and not where they constitute a total in themselves. A comparison of where easel pictures are displayed in their collective result (as at specially constructed and arranged picture galleries, such as national and private collections) with the results produced by interiors containing specially designed work (as the Sistine Chapel, the Library at Siena, the Spanish Chapel of Sta. Maria Novella at Florence, the Riccardi Palace at Florence) will, I think, justify the claim of the latter as the more logical and greater achievement. However exquisite and jewel-like the easel picture may be, unless produced for a special place and purpose (which is rarely the case), its consequent isolation entails discord. The habit and training of the architectural mind may account for much difference of opinion in this respect. The question has been asked what is decorative in the painter's work. In my paper this was alluded to, but examples may indicate still further what was in my mind. The work of Carpaccio at the Accademia at Venice, Pinturicchio at Siena, Botticelli, Giotto, Cimabue, Veronese, Tintoretto, to me exhibit in varying degree the decorative quality as compared with the works of Raphael, Murillo, and Turner. I think that a thing which can go here and everywhere and fit only accidentally cannot be compared with those things which are intended for the place they occupy.

*** Illustrations to the Papers included a charming collection of water-colour studies by Mr. Edgar Wood, the subjects including the Mosquito Chapel, Alhambra; the Palazzo Municipale, Siena; Court of the Myrtles, Alhambra, showing loggia with wood ceiling enriched with colour and mother-of-pearl; studies of fresco at San Zeno, Verona; mosaic and relief colour in the Baptistery of Ravenna; interiors of Torcello, St. Mark's, and the Church of the Frari, Venice; San Marco, Florence; interior of the Cathedral at Monreale, showing richly coloured wood roof; S. Trinità, Florence, with designed decorative composition over end chapels; mosaics of San Vitale, Ravenna; interior of Cathedral of Siena; the Church of St. Francis at Assisi.

Mr. Crace exhibited a number of reproductions of famous old frescoes to illustrate the point brought out in his remarks about the decoration being so treated as to become part of the building itself. The subjects shown were "The Ecstasy of St. Catherine," from a fresco by Razzi; "Philosophy," from a fresco by Raffaele, on the ceiling in the Stanza of the Vatican; "The Death of St. Fina," after the fresco by Domenico Ghirlandaio in the Chapel of St. Fina at S. Gimignano; the Sala Piccolomini at Siena, by Pinturicchio.

MICHELOZZO MICHELOZZI.

By Fredk. R. Hiorns [*A.*].

THE brilliance of Brunelleschi's genius was such as outshone that of almost all his contemporaries, in spite of the acknowledged greatness of many of them. Among these may be counted Lorenzo Ghiberti, Donatello, Luca della Robbia, and Michele di Bartolommeo, or Michelozzo Michelozzi as he is commonly called, These, with Brunelleschi himself, constituted a coterie of Florentine talent hardly excelled in any other period. Florence then—early in the fifteenth century—stood at probably its highest point in æsthetic achievement, and these great masters brought it a fame which passing centuries have, with increasing emphasis, confirmed. The first half of the fifteenth century witnessed the current of European art turned, as it were, into another channel, and for this remarkable change citizens of Florence were chiefly responsible. Brunelleschi and Michelozzo were practically the authors of the movement as far as the classic revival in architecture is concerned, and in conjunction with Ghiberti, Donatello, and the della Robbia furnished just that aspect of the sculptor's art needed to round off the introduction of the new æsthetic phase.

Michelozzo Michelozzi was, according to Vasari, born in the year 1396, presumably in Florence, but both the time and place of his birth are obscure. We know, however, on good authority, that in his youth he studied sculpture and design with Donatello, previous to which he had worked under Ghiberti, and assisted him in the gates for the Florentine Baptistery. Under the tuition of two such masters, and aided by undoubted natural talent, he became one of the most able sculptors of his time. Vasari records that "Donatello availed himself for many years of Michelozzo's aid; the latter having acquired great practice in works of marble as well as in the casting of bronze." Among other things he assisted Donatello with the monument to the deposed Pope John XXIII. (Baldassare Cossa) placed to the right of the high altar in the baptistery, or church of S. Giovanni Battista, at Florence, 1424–1427, and executed the figure of Faith; while he executed a statue of San Giovannino to be placed over the door of the sacristy opposite (according to Vasari) which was much admired and now reposes among the modern bronzes of the Florentine Gallery. He likewise assisted Luca della Robbia with the bronze doors of the northern Cathedral Sacristy—a work considered to be second only to Ghiberti's "Gates of Paradise"—and the St. Matthew on the exterior of the church of Or San Michele is attributed to him and Ghiberti. The date of the latter work appears to be 1422.

The Pulpito della Cintola, on the exterior of the Duomo at Prato, is a joint work of Donatello and Michelozzo, with bas-reliefs probably quite as beautiful as those of the more famous *cantoria* of Santa Maria del Fiore. The two angel figures which belonged to the Bartolommeo Aragazzi Monument at Montepulciano—and now in the South Kensington Museum—furnish all the evidence necessary to emphasise Michelozzo's ability as a sculptor.

Our interest, however, is not so much with Michelozzo's works in sculpture as with his more important productions as an architect. He was one of those composite artists—of which the early Renaissance produced so many—whose talents were not confined to one expression of art only, but who practised it in the comprehensive or universal sense. The character of the times and the method of an artist's training admitted of this. The influence of Brunelleschi, who was building the cathedral dome while he worked with Ghiberti and Donatello, doubtless led his thoughts towards architecture. Brunelleschi's friendship for Donatello, who had shared the fortunes of his first pilgrimage to Rome, and his frequent association with Ghiberti, must have early brought him into contact with Michelozzo. That the latter studied with advantage the reviving architecture, as represented in Brunelleschi's executed works, is made abundantly clear in the buildings he himself did, and Brunelleschi possibly may have been glad to avail himself of the assistance of a younger man of kindred tastes. When the dome of Santa Maria del Fiore was started, in 1420, Michelozzo was twenty-four years of age, and so great and daring a task would inevitably stir his imagination and stimulate his interest in architecture. Cosimo de' Medici (*Pater Patriæ*), who delighted in the society of artists, recognising his merits—as he had already those of Brunelleschi—attached him to his service, and was, throughout his life, a generous patron and friend. In the troubles which occurred at Florence in 1433, and led to the imprisonment and subsequent banishment of Cosimo, Michelozzo was one of "several learned and ingenious men" who accompanied him to Venice. Here he was employed in "making models and drawings of the most remarkable buildings in Venice, and also in forming a library in the monastery of St. George."* Vasari also records that "in addition to the many designs and models which he made in that city for various private dwellings and public buildings which he decorated for the friends of Cosimo and other nobles, Michelozzo constructed the library of the monastery of San Giorgio Maggiore." This he did at the expense of Cosimo, to whom, it is said, this building alone could give pleasure during his exile.

* See Roscoe's *Life of Lorenzo the Magnificent.*

The library appears to have existed until the year 1614, and then to have been destroyed to allow for a rebuilding of the monastery on the completion of Palladio's church. A carved wooden crucifix by him, since placed over one of the altars of the church, is all that remains of Michelozzo's work here.

When Cosimo was recalled to Florence in 1434, Michelozzo shared in his triumphal return. It was apparently about the time of this event that he planned and built for Cosimo the palace now

PALAZZO RICCARDI, FLORENCE.

so well known by the name of Riccardi, and undoubtedly one of the most notable of Italian Renaissance buildings.* The story of an earlier design made for the palace by Brunelleschi is well known. As has been well said by the biographer of Lorenzo, "Brunelleschi gave scope to his invention and produced the design of a palace which might have suited the proudest sovereign in Europe; but Cosimo was led by that prudence which, in his personal accommodation, regulated all his conduct, to prefer the plan of Michelozzo, which united extent with simplicity and elegance with convenience. With the consciousness Brunelleschi possessed also the irritability of genius, and in a fit of vexation he destroyed a design which he unjustly considered as disgraced by not being carried into execution." However, the preference shown for Michelozzo's design, in this instance, certainly did not imply any lack of confidence in Brunelleschi on the part of Cosimo de' Medici. It is well known that he acknowledged him on all occasions as the first architect of his time, employed him on many commissions—which included the church of San Lorenzo—and after his death, in 1446, provided a monument to his memory. The less ambitious scheme for the palace evidently embodied more correctly the requirements and ideas of Cosimo and was accordingly carried out. Vasari says of it that "Michelozzo deserves all the more credit for this building, since it was the first palace erected in Florence after modern rules, and in which the rooms were arranged with a view to conveni-

* There is some doubt as to whether the building of the Medici Palace preceded or followed Cosimo's exile from Florence, but the time mentioned above has Roscoe's authority, and appears, on the whole, most likely to be correct.

ence as well as beauty." Quatremère de Quincy's* remarks on the subject may be read with advantage, and also his discussion on the influence of material, and the character of the times, as affecting the design of Florentine *palazzi*. "Le Palais Medici," he remarks, "est une des masses les plus imposantes entre toutes celles des palais de Florence. L'emploi des bossages, sans perdre son caractère de force, y est ménagé avec plus de variété qu'au palais Pitti. Les fenêtres y sont, comme à ce dernier, en arcades divisées par une colonne qui y fait deux ouvertures. Le soubassement du palais est occupé par cinq arcades diversement espacées, et dont une est la porte ; les autres sont remplies par de beaux chambranles de fenêtres. Le palais

PALAZZO RICCARDI, FLORENCE : DETAIL OF EXTERIOR.

* *Histoire de la vie et des ouvrages des plus célèbres architectes*, par Quatremère de Quincy.

est couronné par un entablement riche, mais un peu massif, et généralement inférieur à celui d'un palais du même genre, le palais Strozzi." Following after the Medici Palace it would be strange perhaps if the Strozzi did not in some respects improve upon it; yet the general effect produced by the former is surely the finer of the two.

The present building is considerably larger than as originally built. When acquired by the Riccardi family, about the middle of the seventeenth century, additions were made which almost doubled the length of the main frontage and radically changed the proportions of the building. Happily the original architectural treatment was closely followed—the designer of the additions showing a proper consideration for the claims of Michelozzo's structure in so successfully adapting its excellencies in extending the building. The treatment, though classic in detail, is distinctively Tuscan in general character. An appropriate distinction is made in the treatment of the wall surfaces, in the three stages of the building, and the proportions and ornament alike exhibit a discriminating taste. The variations in the ground story "bossages"—to which de Quincy refers—produce an excellent effect. The main façade, though so simple in its elements, is about 300 feet long by 90 feet high, and its fine scale, and the sense of indestructibility imparted by its massive character, make it worthy of comparison with Roman work. Even Fergusson* was impressed by "its proud contempt of those structural exigencies which must govern all frailer constructions," and regarded this palace as illustrating all the best characteristics of its style. So also Forsyth speaks with admiration of "a construction which fortified the whole basement with large, rude, rugged bossages, and thus gave an imposing aspect, and sometimes a necessary defence to the nobility of a town for ever subject to insurrection."

Michelangelo appears to have made some alterations to this building, but to what extent is not clear. It has been said that he was responsible for forming the openings in its lowest stage, which originally presented an unbroken face—entire as a Cyclopean wall—but the authority for this seems doubtful. These ground floor windows are thought to be the first examples which show cills supported by consoles.

Of the internal courtyard the lowest stage forms an open arcade. The great gallery has a ceiling decorated in fresco—a masterpiece of Luca Giordano. It was in this hall that Charles VIII. of France was received, and, in answer to his threat to the deputies, received the spirited reply of Pietro Capponi, "If you sound your trumpets we will ring our bells." Other persons entertained at this palace were the Emperor Charles V. and Pope Leo X., and here also the notorious Duke Alessandro, illegitimate brother of Catherine de' Medici, was assassinated by his treacherous kinsman, Lorenzino.

Benvenuto Cellini's interesting account of his visit to Alessandro in this palace will be found detailed in his "Memoirs."

The beautiful chapel—in Michelozzo's portion of the building—contains the frescos of Benozzo Gozzoli (disciple of Fra Angelico), including a Glory, a Nativity, and an Epiphany. These glorious decorations are thought to have been painted by lamplight, there being originally no window to the chapel. The ceiling is flat, and the architectural details of the room, though richly treated, show excellent taste.* Other portions of the interior have been considerably altered since Michelozzo's time.

Taking leave of this palace we may well pay it that homage which the inscription on its portal invites—

> Hospes—Mediceas olim ædes, in quibus non solum tot principes viri, sed et sapientia ipsa habitavit, ædes omnis eruditionis quæ hic revixit nutrices—Gratus venerare.

It would appear that, about the time the Medici Palace was in progress, Michelozzo was called upon to restore and reconstruct portions of the old Palace (Palazzo Vecchio) at Florence, which Vasari draws so much attention to in order to emphasise the *superiority* of the alterations which he himself made to the building more than a century later. Michelozzo's work appears to have comprised the construction of the outer courtyard, and consequent changes in the adjoining buildings, considerable additions being also made for the more adequate accommodation of the Signori, the Gonfalonieri, and the attendant servants and military. Many new and beautiful ceilings were also formed in the old building, and doors and windows provided "after the modern fashion and similar to those the master had constructed in the palace of the Medici," and the chapel was improved and decorated. In a word, as Vasari says, "he gave to the whole building that perfection of completeness which is proper to such a palace." Some of the carved ornaments were done by himself, including a doorway at the entrance to the Court "with pillars of *pietra forte* and very beautiful capitals, a cornice, and double architrave of very good design, in the frieze of which he placed the arms of the commune." Unfortunately this door has since been removed. As a reward for his work at the Palazzo Vecchio, Michelozzo was elected one of the Gonfalonieri of Florence—a very high and honourable office.

It was in the year 1437 that Cosimo de' Medici commissioned Michelozzo to build, on the site of some ruinous buildings occupied by monks of the Order of St. Sylvester, what is now known as the

* *History of Modern Architecture.*

* For illustrations of the Riccardi Palace, see Gauthier. There is a coloured model of a portion of the chapel in the South Kensington Museum.

Monastery of St. Mark, or Museo di San Marco.* Cosimo had obtained the Pope's permission to replace the notorious Sylvestrine monks by those of the Dominican Order, and instructed Michelozzo to design for them buildings "on the most extensive and magnificent scale, with all the conveniences that those monks could possibly desire." The buildings included a chapel, dormitories, library, and a cloister, and were completed in 1443 at a cost to Cosimo of 36,000 ducats—a very considerable sum at that time. In 1454 a severe earthquake damaged the buildings and almost destroyed the library, but Cosimo had them carefully restored, and took the opportunity to raise the roof of the library so as to admit of a more extensive collection of books. The establishment of this library fulfilled a pet ambition of Cosimo's, and the opportune death of Niccolò Niccoli, the greatest manuscript collector of his time and one of its most learned men, endowed it with a store of most valuable works. Distinguished as being practically the first public library to be formed in Europe, its illuminated manuscripts were among the finest in the world.†

The buildings are very plainly treated, as befits the austere character to be associated with a fifteenth-century monastery. The architectural treatment is very reminiscent of some of Brunelleschi's work, more especially as expressed in the cloistral buildings of San Lorenzo at Florence. As finally completed, Vasari described it as being "the best conceived and most beautiful and convenient building of its kind to be found in Italy, thanks to the skill and industry of Michelozzo." Popular fame attaches to it chiefly from its association with Savonarola, and from the possession of the wonderful frescos of Fra Angelico—surely the most religiously beautiful paintings in the world. The Beato Angelico was a close friend of Michelozzo's, and worked with him for several years, until summoned by the Pope to Rome to paint in the Vatican. The architect's portrait has been introduced into several of the friar's paintings, including his "Deposition from the Cross" in the Accademia delle Belle Arti. It was in the middle of the library hall, "under the simple vaults of Michelozzo," that Savonarola placed the sacrament and, collecting the friars around him, delivered to them his last address.

The chapel of the Medici, in Santa Croce,

ST. MARK'S CLOISTER, FLORENCE.

* Professor Villari's *Life and Times of Savonarola* furnishes some interesting particulars of this monastery during Savonarola's day.

† Florence—and indeed the whole of Europe—owes a great debt to the Medici family for their encouragement of learning in the establishment of many libraries, which in the fifteenth and sixteenth centuries were somewhat of a novelty. It is recorded of Lorenzo that, when at the point of death, he remarked to those around him, "I would fain have this same Death put off his visit to me until the day I had completed your Library." Florence in the fifteenth century was a great centre of erudition, and the more learned brothers of the Dominican order resorted to the monastery of San Marco.

Florence, is another of Michelozzo's works, and contains a marble tabernacle by Mino da Fiesole, a relief of the Madonna attributed to Luca della Robbia, and an altar-piece—a Coronation of the Virgin—by Giotto. Vasari also mentions the doorway leading from the church to the sacristy "which the master executed in grey stone, called *macigno*," and which was much commended for its novelty and for the beauty of its decorations; since it was at that time "but little the custom to imitate the good manner of the ancients, as Michelozzo did in that case."

The marble chapel of the Crucifix, in S. Miniato al Monte, was designed by Michelozzo in 1448 for Piero de' Medici. It was of this church that Fergusson said "it would be difficult to find one in Italy containing more of classical elegance, with perfect appropriateness for the purposes of Christian worship." Another work attributed to him is the porch of the church of S. Felice, Florence—near the Pitti Palace.

For Cosimo Vecchio, Michelozzo also built the Villas Mozzi and Careggi and the Palace of Cafaggiolo—all of them in the environs of Florence. The last mentioned of these—about ten miles from the city, along the Bologna road—partook of a fortress character and was surrounded by a ditch, but this has since been filled in and other changes made. Near by are ruins of the once celebrated Villa of Pratolino, built by Francesco de' Medici for his mistress, Bianca Cappello. The beautiful Villa Mozzi, with its fine terraces and gardens, is delightfully situated close to Fiesole, and was the favourite residence of Lorenzo the Magnificent. Here he gathered around him the famous literati of his time and discussed with them the much favoured Platonic philosophy. It was at this villa that the Pazzi proposed to murder Lorenzo and Giuliano the elder—the plan being frustrated by the illness of the latter. The view over Florence from the hill is magnificent. The situation of Careggi also—about three miles north-west of Florence—is extremely beautiful, and it has been described as "the most bewitching of all the Medicean villas." It was in this house that Cosimo, *Pater Patriæ*, died on 1st August 1464, and Lorenzo also in 1492, following his deathbed conversation with Savonarola. This renowned villa possesses a most elegant internal loggia.

The Palazzo Tornabuoni, at Florence, was built by Michelozzo for Giovanni Tornabuoni, and afterwards came into the possession of Alessandro de' Medici, Cardinal of Florence. It still exists as the Palazzo Corsi-Salviati, but was remodelled in the year 1867. The Palazzo Strozzino—near by, and somewhat similar to the famous Strozzi Palace—is by some attributed to Michelozzo (1460), and Bocchi* ascribed the Ricasoli Palace, Borgo Ognissanti, to him also. He prepared a design for the citadel of Perugia and improved the sources of water supply at Santa Maria degli Angeli, Assisi, adorning the wells there with a rich and beautiful loggia. He made also some alterations at the convent by Cosimo's instructions. Although credited by Vasari with works in marble and bronze at Genoa, it does not seem possible to find what are referred to.

The extraordinary and magnificent *Cappella della santissima Vergine Annunziata*, in the Florentine Church of SS. Annunziata, was a joint work of Michelozzo and Pagno di Lapo Portiginai, the latter—also one of Donatello's pupils—being chiefly responsible for its actual execution. The chapel was constructed for Piero de' Medici, and the materials used were of great richness. The columns (17 feet high), entablature, and canopy, or ceiling, are of marble, and the whole is most richly carved and decorated with enamels, mosaic, gold, and precious stones, which, with the bronze doors and railings and other fine metal work, candelabra, and silver hanging lamps, form a monument almost dazzling in its sumptuousness. The much venerated painting of the Virgin, behind the altar, is a thirteenth-century fresco by Pietro Cavallini, a pupil of Giotto.* The painting of the Saviour, above the altar, is by Andrea del Sarto, and the crucifix by Giuliano di San Gallo. This celebrated chapel gives evidence of the wealth and importance of the Medici family at the period of its foundation. Piero de' Medici availed himself of Michelozzo's services not only because—as Vasari puts it—"he highly estimated the skill of that master, but also because he knew how faithful a friend and servant the latter had been to Cosimo his father."

In the year 1460, or thereabout, Michelozzo was in Milan engaged in restoring a house presented to Pigello Portinari—representative of the house of Medici in that city—by "the illustrious Francesco Sforza, fourth Duke of Milan, as a mark of his gratitude and also of the friendship which he felt for him, and for the worthy memory of the magnificent Cosimo," as recorded by Filarete in his book on architecture. Portinari, a very wealthy man, expressed his gratitude for the gift by enlarging and improving the house, re-embellishing it and "making it like new at no little expense." This house, in the Via dei Bossi, became the headquarters of the Medicean Bank and was later known as the Vismara Palace. It appears to have been destroyed about the middle of the eighteenth century, but one of its fine stone-sculptured doorways—bearing the arms and portraits of Francesco Sforza and Bianca Maria Visconti—is to be found in the Museo Archeologico at Milan. The two carved female figures, which originally embellished the palace front, are considered to have been sculptured by Michelozzo himself, and if so it was a remarkable performance for a man sixty-five years of age.

* *Bellezze di Firenze*, Francesco Bocchi.

* See Vasari, and Lanzi's *History of Painting in Italy*.

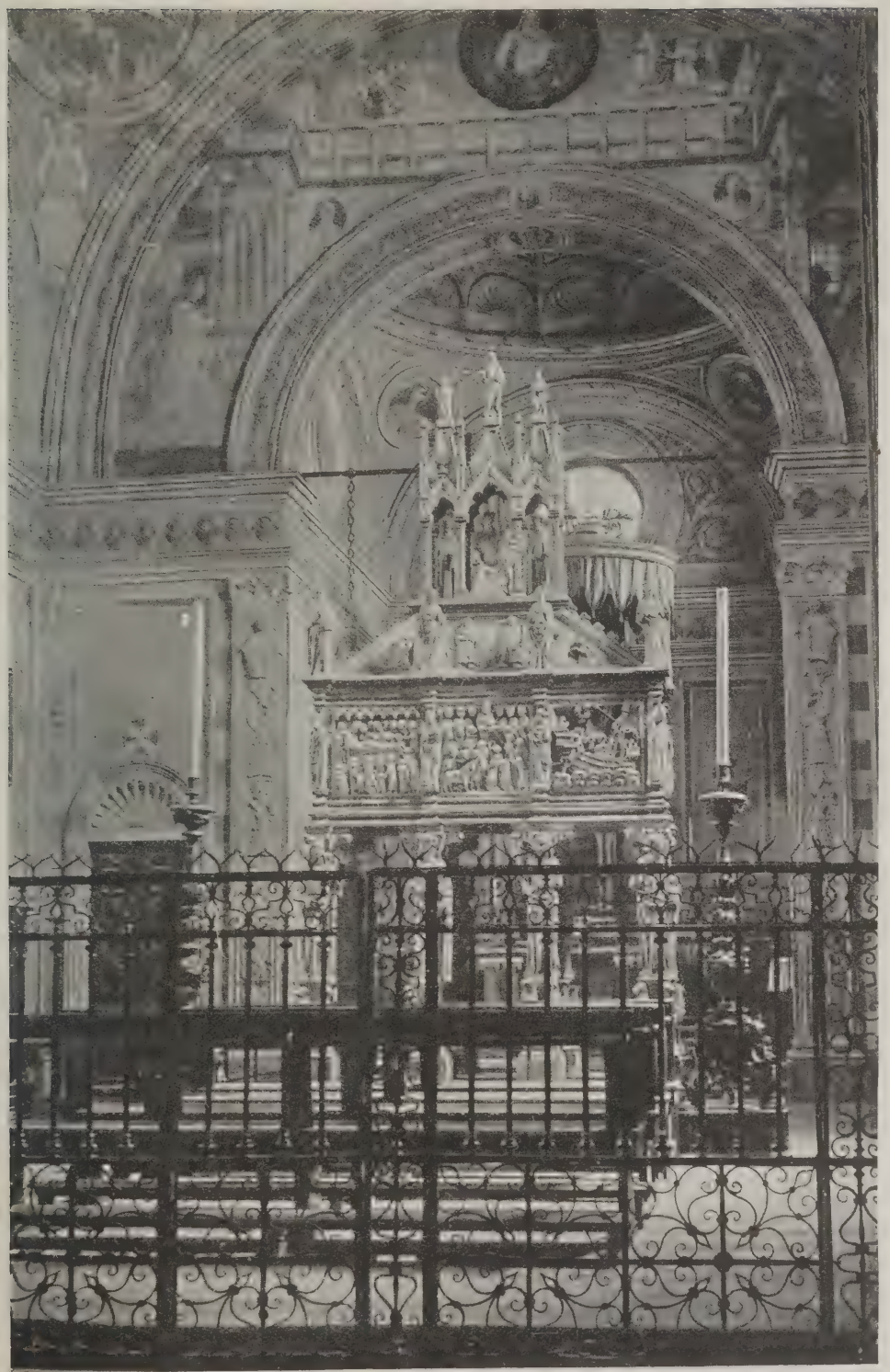
Michelozzo's connection with the restoration of Pigello Portinari's house was chiefly of importance in that it led to his receiving from Portinari the commission to build a chapel to contain the mausoleum of Peter of Verona, adjoining the ancient church of Sant' Eustorgio, Milan. This militant saint—whose memory was thus to be perpetuated—had obtained great fame, in the beginning of the thirteenth century, by his zeal for the extermination of heretics. This somewhat misdirected enthusiasm led to his own murder in the year 1252. A mausoleum was made to contain his remains by the Pisan sculptor, Giovanni di Balduccio—pupil of Andrea Pisano—and, after three years' work, was finished in 1339 at a cost of two thousand gold ducats.* The body of the saint was deposited in the monument in the following year, the latter being then placed in an inclosed portion of the northern aisle of the church. There it remained until, in 1462, Pigello developed his scheme for building a special chapel "for the body of St. Peter Martyr, owing to the great veneration he had for that saint." A site was found on vacant ground, beyond the sacristy, at the eastern end of the church, and Michelozzo designed the building. Begun in 1462 the chapel was finished in 1468, in which year Pigello Portinari died and was buried within the building. The plan is square, with a square recess on the eastern side, forming the sanctuary and containing the altar.† Each division is covered by a cupola. Some authorities trace a connection between the general conception of this chapel and Brunelleschi's Pazzi chapel at Santa Croce, Florence, but the points of similarity are not very obvious. For its size and style, this little building of Michelozzo's is, perhaps, hardly to be excelled in Italy. The cupolas are carried on pendentives above the arches spanning across the sides. The lighting is by means of windows in the side walls—of a curiously mixed Gothic character, which somewhat mars the unity of effect—and by circular "eyes" in the drum of the dome. The frescos and other colour decorations are remarkable—among the artists credited with a share in this work being Vincenzo Foppa (known also as Vincenzo the Brescian), Bartolommeo da Prato, and Bonifacio Bembo, called da Valdarno. The pendentive spandrils of the domes, and the lunettes of the cross arches and spaces above, are filled with frescos—while around the base of the dome is a charmingly modelled and coloured frieze of angels, in painted terra cotta. The dome itself, with its peculiar shell-like formation, has also a decorative colour scheme. The walls are treated very plainly with a panelled design. Some idea of the effect of this building may be formed from the model in the South Kensington Museum. Signore Ricci* truly says of this beautiful chapel that both in its general aspect and detail "it provided, as it were, a refuge in Milan for the Tuscan art of the mid-fifteenth century—of the period, that is to say, when the architectural forms that had their origin in Brunelleschi, and their climax in Giuliano da Sangallo, were carrying all before them." Externally the Portinari chapel shows a natural and pleasing expression of the internal arrangement. The colour and treatment of the brickwork, with its fine moulded cornices and pantile roofing, is excellent. There is sufficient resemblance between the external design of the cupola and that of Santa Maria delle Grazie to suggest that Bramante—if indeed he is its author—may have got a suggestion from Michelozzo's earlier work. The alterations to Sforza's palace and the chapel of St. Peter Martyr represent the introduction of Renaissance architecture into Milan.

It is obvious that the influence of Michelozzo Michelozzi in advancing the course of Renaissance art was considerable, and that he must share with Brunelleschi—to some extent—the credit due to the introduction of the classic revival. The truth of this claim was realised by the architects, and other artists who succeeded them, many of whom acknowledged the debt owing to these two Florentines for having brought this aspect of architecture to "a degree of perfection which it had not known since the time of the ancients." Vasari, whose opinion is by no means always to be relied on, was probably quite accurate when he said that "after the death of Brunelleschi, Michelozzo was considered the most consistently *regular* architect of his time." The two men had probably worked together to a greater extent than is commonly realised or acknowledged. Brunelleschi's erratic temperament, and his frequent and long absences from Florence, make it likely that Michelozzo was largely responsible for the superintendence or execution of his works. Their identities became somewhat mixed, and their works show, in several instances, marked similarities. Fergusson says with regard to the Pitti Palace that, though the design is said to have been by Brunelleschi, "it is doubtful how far this is the case, or, at all events, how much may be due to Michelozzo, who certainly assisted in its erection." As he also rightly adds, "designing a building, and erecting it, were not then such distinct departments of the art as they have since become." The work of both these pioneer architects displays the bold, manly elements of the Tuscan character. The breadth and grandeur of Roman work were well expressed in those earliest examples of the Florentine Renaissance,

* A description of this wonderfully carved sarcophagus and other interesting information will be found in Commendatore Luca Beltrami's notes on "the chapel of St. Peter Martyr, in the Church of Sant' Eustorgio, Milan." See also *L'Arte in Milano*, Giuseppe Mongeri.

† From rough measurements, taken when on a visit to this chapel, the two divisions of the plan are about 31 feet square and 17 feet square respectively. The interior view was kindly taken for me by a friend—that of the exterior being my own.—F. R. H.

* *Art in Northern Italy*, by Corrado Ricci.



CAPPELLA PORTINARI, S. EUSTORGIO, MILAN.

though in a manner so distinctive as to remove them from all suggestion of mere imitation of antique remains. In this sense they falsify the common—but untrue—charge that the classic Renaissance was but a lifeless attempt at copying

EXTERIOR OF CAPPELLA PORTINARI, S. EUSTORGIO, MILAN.

a phase of art which had long before expired. Probably no more true type of pure architecture is to be found in the whole course of the Italian Renaissance than that represented by the Riccardi Palace—free as it is from the meaningless and illogical application of the orders, so commonly occurring in the buildings which succeeded it. As Quatremère de Quincy says: "Michelozzo passa pour l'homme de son temps le plus ingénieux, dans l'art d'adapter aux dispositions peu recherchées des édifices d'un autre âge, la variété des convenances et des sujétions imposées par le luxe de son siècle." He combined simplicity of treatment, in his works, with a sense for proportion and detail almost Grecian in its refinement. From his portrait one judges him to have been a man of genial and generous disposition, and his personal qualities, like his talents, were valued highly by his contemporaries. He died, as far as can be ascertained, in the year 1472, and was buried in the tomb he had himself prepared in S. Mark's at Florence.

In an architectural sense he worthily bridged the gulf between Brunelleschi and Bramante, and perhaps that is the most fitting tribute we can pay to his memory.

REVIEWS.

AVIGNON.

The Story of Avignon. By Thomas Okey. Illustrated by Percy Wadham. "Mediæval Towns" Series. Sm. 8o. Lond. 1911. *Price 4s. 6d. net. [J. M. Dent & Sons, Ltd., Bedford Street, Covent Garden.]*

This little book, full of erudition and charm, deals with one of the most interesting cities in the world. For does not its history begin, if not with the Flood as some do fable, at any rate with St. Martha, hostess of Our Lord, with Lazarus her brother, her sister Mary and St. Maximin, who in the year of our Lord 35 being cast by the Jews into a ship "wythout sayle ores or other gouvernayle," voyaging up the Rhone, came across a dragon, "gretter than an oxe, lenger than an hors. . . To whom Martha at the prayer of the peple came into the wode & found hym etyng a man. And she cast on hym holy water & shewed to hym the crosse, which anon was overcomen, & standyng styl as a sheepe, she bonde him wyth her owen gyrdle" [another legend says her garter] "& thenne was slayne wyth speres & glayves of the peple. The dragon was called of them that dwellyd in the contre Tharasconus." Are not these things written in the Chants of Mistral's *Mireille*, written when he made pilgrimage to the great castle church of Les Trois Maries—fourteen happy pilgrims couched in straw in a wagon, their slow leisurely progress gladdened by legend and song? In the long Pax Romana, Avignon was happy in having no history. In 583 it was captured by the Franks under Gontran, son of Clotaire, who found in the treasury 250 talents of silver and 30 talents of gold. In 738 the plains to the west were black with fiery little steeds and swarthy light-armed riders; it was the Saracens; twice they captured Avignon. Then came a long period of rivalry between the great houses of Provence and Toulouse, and, by accurate trimming, Avignon succeeded in freeing herself from the domination of both, and became an independent State, and remained a republic practically up to 1251.

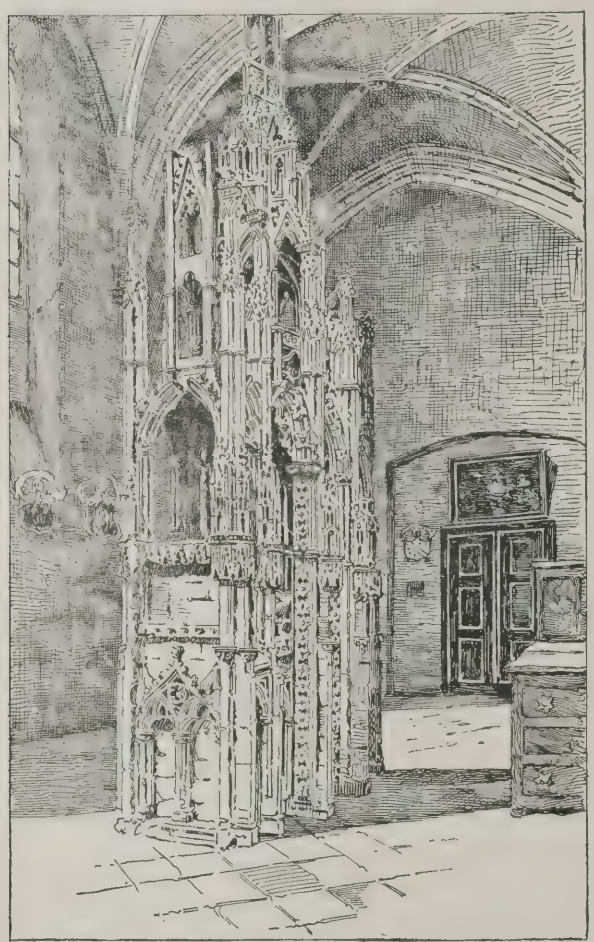
The greatest event, however, in the early history of Avignon was the building, with the aid of Saint Benezet, of that great bridge across the broad Rhone, which with its bridge-chapel of St. Nicholas still survives in part, one of the most imposing monuments of the Middle Ages. This was in 1177. "Since the Pont St. Benezet was the only stone bridge between Lyons and the sea, until the building of the Pont St. Esprit in 1309, the importance it conferred on Avignon may easily be conceived. The counts of Toulouse lavished privileges on the Friars Pontiffs; popes offered indulgences, emperors and kings privileges, to all who should contribute by money or labour to maintain it in repair. Soon every road converged on the bridge of Avignon, and even to this day at Nîmes, Aix, Vienne, and many another city of the South, a Porte or a Chemin d'Avignon testifies to its former importance."

Next came the awful wars with the Albigenses; and Avignon, being in sympathy with the sectaries, was besieged by King Louis VIII., and held out for three months against the whole power of France.

Then came the greatest event in the history of Avignon. This was in 1304, when the French king, Philip, consummated his long quarrel with the Papacy by poisoning (with a dish of figs, says Villani) Pope Benedict XI.; for his confederate, the Archbishop of Bordeaux, he succeeded in getting the papal chair; and the new pope, Clement V., transferred the Papal seat from Rome to Avignon. "This fateful decision was the beginning of Avignon's historic glory. As before to the city of seven hills on the Tiber, so now to the hill city on the Rhone, every road led, and soon a constant procession of the great ones of the earth, or their envoys, streamed to Avignon, to deprecate the ban or sue for the blessing of the Vicar of Christ on earth: prelates and priests, jurists and clerks, waiters on fortune of all kinds, flocked to the little city where the vast patronage of the Christian world was dispensed and the supreme ecclesiastical court of Europe pronounced its irrevocable decrees."

Clement was succeeded by Pope John XXII. Money rained on Avignon till 1376, when that sweet Saint, Catherine of Siena, succeeded in bringing back the Papacy to Rome. It is estimated that John XXII., who was Pope for only eighteen years, left behind a hoard of 100 millions of our money. Vast, too, were the fortunes of the Cardinals. Cardinal Roger, in 1364, left three-quarters of a million in modern sterling; others were wealthier still; Avignon, and Villeneuve on the opposite bank of the Rhone, are full of their palaces. Of all these accumulations of treasure, very little was spent on churches; Avignon had then, and has still, a little Romanesque cathedral of the twelfth century; the only really important religious foundation due to these fourteenth-century Popes was the double Carthusian Monastery at Villeneuve. The one great work was the mighty Castle of the Popes in Avignon, one of the most stupendous works of the Middle Ages or of time. Till lately, it was cut up by floors into dormitories for the French troops; these have now been cleared out, and the Castle is receiving one of those drastic restorations which have rendered nearly all the French monuments unhistoric. To say nothing of the wonderfully picturesque situation of the city, the Castle of the Popes alone is worth all the trouble of a journey from England. Here may be seen what are probably the finest wall paintings of the Middle Ages, and the torture-chamber, "funnel-shaped," says Mr. J. A. Symonds, the historian of the Renaissance, "to drown and suffocate the shrieks of wretches on the rack," but which, as a matter of fact, is the kitchen. Then there is the

vast Hall of Audience, with its two parallel naves; and above it, all in one span, the vaulted Chapel of the Popes, finished in 1347: the latter, without doubt, one of the noblest halls in existence. At this point we must send readers to the book; the city is all full of memories—of Petrarch and Laura, of Rienzi tribune of Rome, of Bertrand du Guesclin, of St. Catherine of Siena, of Froissart, of Simon Langham Abbot of Westminster, Bishop of Ely, Bishop of London, Archbishop of Canterbury, and



TOMB OF POPE JOHN XXII.

Cardinal; of the Old Pretender and the Young Pretender; here John Stuart Mill and Mrs. Mill lived happy years, and lie buried in the little cemetery; a boulevard is named "Stuart Mill." In conclusion, let me add that Mr. Okey's work is no mere compilation; it is a work of originality and real value. One word of thanks on my own account. Two years ago, on examining the tomb of Pope John XXII. in the cathedral of Notre Dame des Doms, I was surprised to find that though it is attributed to a French sculptor, John of Paris, nevertheless in design, with its open spirelets, vaulting of liernes and tiercerons, and battlemented pinnacles, it is English through and through, a replica, in fact, of the monument of Edward II. in Gloucester and of the similar monuments in Tewkesbury. Mr. Okey, quoting from Ehrle's *Historia Palatii Romanorum Pontificum Avenionensis*, suggests the key to the puzzle. He records payments made in 1339 to an English mason, named Johannes *Anglicus* or *Englicus*. It has been contended that the origin of the French Flamboyant is to be found in English work of the first half of the fourteenth century. It has been shown elsewhere that a Frenchman visited England to buy alabaster; here it seems very probable that an Englishman in 1339 was working in what was practically French territory, and building in English style no less than a monument of a Pope. The book is well produced, except that many of the leaves are uncut.

FRANCIS BOND [*Hon. A.*].

THE MODERN HOUSE.

The House and its Equipment. Edited by Lawrence Weaver. 4to. London and New York. 1911. Price 15s. net. Published at the Offices of "Country Life," and by George Newnes, Ltd., 8-11 Southampton Street, Strand, London, and by Charles Scribner's Sons, New York.

Mr. Lawrence Weaver has followed his charming book on "Small Country Houses of To-day" by another work conceived somewhat on the same lines called "The House and its Equipment," except that the former work may be said to have appealed more directly to the architect, whilst the latter will appeal more to the general public. It is, however, none the worse for that, for it is quite certain that no general advance can take place in what one may call traditional design as applied to architecture unless the public go hand in hand with the designer, so that any work which tends to interest "the man in the street" in our art, and incidentally to educate him so as to be able to distinguish good work from bad, is a step in the right direction.

Mr. Weaver has divided his work into a series of chapters by different authors on the great variety of subjects with which an architect who hopes to be able to produce good work is expected to be familiar. How large that variety is may be gathered from the fact that the work extends to over forty chapters, dealing with subjects as widely different as "Colour in the House" and "Lightning Conductors," "The Design of Grand Pianos" and "Water-power Installations," etc., etc. This blending of the artistic and the practical is a very fair reflex of the qualities necessary to enable anyone to design a properly equipped modern house.

On turning to the ends of the various chapters

to ascertain the names of the authors responsible for them, one finds that they have been entrusted to men whose names are a guarantee that they are well qualified by experience and practice to discourse on the various subjects they deal with. Thus we have Mr. Ernest Newton on "Domestic Architecture of To-day," Mr. Troup on "Plasterwork," Mr. Gotch on "Wood-panelling," and Mr. Quennell on "Fireplaces"; and turning to subjects not so strictly architectural we have Mr. Bernard Drake on "Electrical Working Costs," Miss Gertrude Jekyll on "Garden Design Generally," and Mr. Starkie Gardner on "Iron Gates and Railings," not to mention the very interesting and critical remarks on a variety of subjects by Mr. Weaver himself.

As an example that the book is not conceived in any narrow spirit of eclecticism, we have both sides of the question represented on many subjects: thus we have an interesting chapter by Mr. Oxenden on "How to Choose Old Furniture," while Mr. Quennell puts "The Case for Modern Furniture" in an equally attractive manner with a further chapter on what he calls "Architectural Furniture," a name which he prefers to "Fitted Furniture" or "Fitments" for that class of furniture which is built into the fabric of the house. Then we have a plea for "Colour in the House," by Mr. Halsey Ricardo, whilst Mr. Gotch extols the beauty and appropriateness of plain wood panelling as a means of decoration with which, as he truly says, the desire to obtain a decorative effect can be gratified more cheaply than by pictures. We hope for Mr. Gotch's sake that this statement will not be read by many painters or we fear he will go in danger of his life.

Mr. Weaver's own article on "The Billiard Room" gives some very useful and practical hints both as to the arrangement and lighting of the room and to the design of the table itself; though as regards the latter it is not very often that the architect is consulted on this question. In some of the examples given, however, where the architect has also been able to control the design of the table, the results are very satisfactory, though we cannot altogether agree with

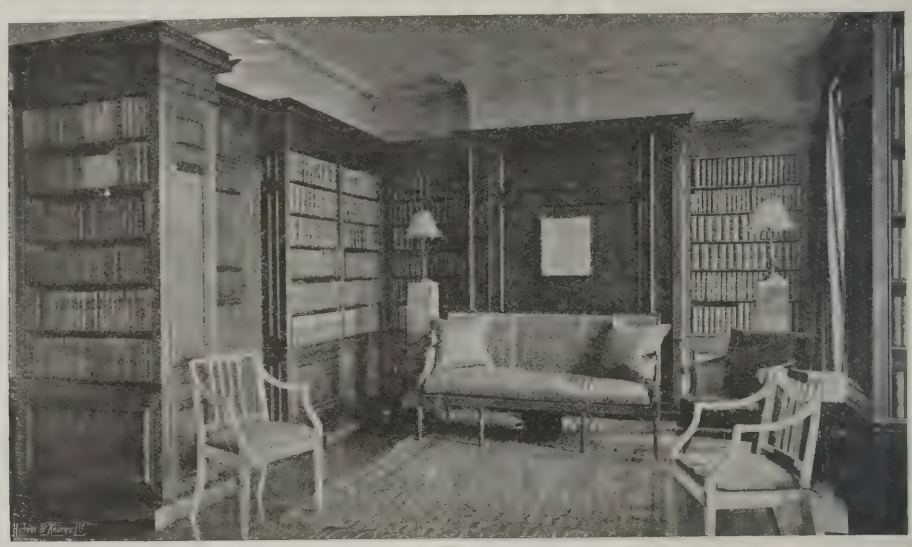
A STONE-BUILT BILLIARD TABLE, DESIGNED BY MR. E. L. LUTYENS.

BILLIARD TABLE DESIGNED BY MR. VOYSEY.

his praise of the table set on a stone base designed by Mr. Lutyens. Of course, it may look better in

execution than in a photograph, but, judged from the illustration, it has too much the appearance of a magnificent sarcophagus to be altogether pleasant in a room designed essentially for pleasure and amusement as a billiard room is, and one would think that the mass of stone in the centre of the room would be somewhat cold in effect. The table designed by Mr. Voysey, shown on the next page, seems a much simpler and more suitable piece of design.

Mr. Weaver's chapter on "Libraries and Bookcases" is also a very interesting one. In it he gives some useful hints as to the arrangement of bookcases and some very charming examples of library arrangement, notably those by Mr. Lutyens for Lady Horner and Lord Haldane and another from Lord Macclesfield's house at Shirburn Hall, showing a clever arrangement for an overflow library in a corridor. The above are only a few of the subjects dealt with in this interesting volume, but such



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practical matters as "Water Supply for Country Houses," "Sewage Disposal," "The Arrangement of Kitchens and Sculleries," "Game Larders," various systems of artificial lighting, and many other subjects, are all dealt with in separate chapters.

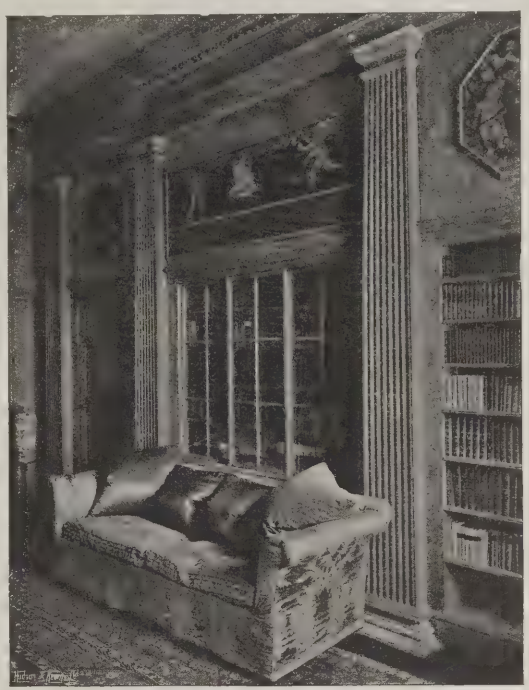
Then as regards the garden and surroundings of the house, this part of the subject is dealt with in a fairly exhaustive manner. There is a long article on "Garden Design Generally" by Miss Gertrude Jekyll, dealing with the subject from an historical point of view, which is enriched by many charming and notable examples from some of the stately homes of England—some of which one fancies to have seen before in that excellent series of "Gardens, Old and New" which have been appearing for so many years in *Country Life*. Then we have a series of articles on various parts of the garden and its adjuncts by different authors, such as "Garden Houses" and "The Art of Treillage" by Mr. Inigo Triggs, "Out-door Dining Rooms" and "Glasshouses" by Mr. Avray Tipping, "Pergolas" by Mr. Lys Baldry, "Orangeries" by Mr. Inigo Thomas, "Statues on Gatepiers" and "Statues on Buildings" by Mr. Weaver, and "Iron Gates and Railings" by Mr. Starkie Gardner.

Mr. Starkie Gardner devotes almost the whole of his article to an account of the work of Jean Tijou, a French smith who came to this country about 1690 and designed much notable ironwork, and more especially the famous garden screen at Hampton Court, which for so many years was ascribed to one Huntington Shaw, of Nottingham. He draws attention to what he considers a great injustice to Tijou and British smiths generally, viz. that on the front of the new Victoria and Albert Museum Huntington Shaw is made to stand for British smithcraft, whereas the Board of Education knew, or ought to have known in consequence of an official inquiry into the subject, that Huntington Shaw had nothing whatever to do with the Hampton Court screen, and was, in fact, an entirely unknown man, and would have remained so but for the monument erected to him in Hampton Church which said "he was an artist in his way," and to the fact that at a later date an addition was erroneously put to the effect that "he designed and erected the monumental ironwork at Hampton Court Palace."

The above are sufficient to show the comprehensive scope of the work and the catholic taste of the authors. To attempt to touch upon all the subjects dealt with in it would entail far too long an article, but in conclusion I would like to compliment the author on the excellence of the reproductions and the character of the letterpress, which are in the style with which one has become familiar from studying the pages of *Country Life*.

There is just one direction in which one must criticise the work unfavourably. Excellent as are the photographs by which it is illustrated, a few measured drawings and details would have added immensely to its value from an architect's point of view.

H. O. Cresswell [*F.*].



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ENGLISH IRONWORK.

English Ironwork of the Seventeenth and Eighteenth Centuries. By J. Starkie Gardner. With 88 *Collotype Plates from photographs chiefly by Horace Dan, Architect, and upwards of* 150 *other illustrations.* 8o. *Lond.* 1911. *Price Two Guineas net.* [*B. T. Batsford,* 94 *High Holborn, W.C.*]

The charm of good ironwork makes a direct appeal to a greater number than does probably any other craft. What is more likely to focus a fine landscape and rivet the attention than an old lace-like gateway in its time-weathered setting, or the delicacy of some wrought-iron screen silhouetted in the semi-obscurity of one of our precious old cathedrals?

Mr. J. Starkie Gardner is an enthusiast on the subject of English ironwork, and we should say knows more about every phase of it, both as an art and as a craft, than any man living; and we are fortunate in the book that he has written, which is evidently the result of many years of patient investigation and research.

Beginning with Jean Tijou, the Huguenot, who, by way of Holland, brought his craft into this country in the reign of William and Mary, he tells us the whole history of English ironwork during the best period of the Renaissance, with a short chapter on mediæval work. It is to be hoped that Mr. Starkie Gardner will supplement the present volume by another, completing the story of English ironwork, which it is rather surprising to find has never yet been undertaken.

Mr. Gardner has discovered the names and lovingly collected particulars of many of the more or less humble English smiths who made the charming old ironwork which still remains to us. These men were all good craftsmen, but their work was not uniformly good in design; in fact, from some of the illustrations in Mr. Starkie Gardner's book it is evident that when they were left free from the restraining hand of the architect or trained designer (to whom Mr. Starkie Gardner does not give enough credit) their work quickly became merely picturesque, lacking in relation to its surroundings and in scale.

In early mediæval times English ironwork was often independent of architectural style, but in later Gothic times the unlimited freedom of the smith was curtailed.

In the early Renaissance period again it was even more necessary that the design of ironwork, together with that for other crafts, should be controlled, although down almost to the present day the ironworker retained a certain knowledge of the traditions of his craft. Now, alas, he buys his ironwork ready rolled in a thousand different sections and can no longer produce his work unaided.

"The old-time smith cut a piece from his shingled bar, which he judged by the eye would beat out into a rod of the required length, or curl into a scroll of the desired form," and by this method, "produced an irregularity and play in even the most monotonous designs which is artistically charming to us, but which probably was a source of reproach to himself."

Modern ironwork, although more mechanically perfect, and maybe more carefully considered in drawing and balance and in the curve of every scroll, can never possess the charm and attraction which the old spontaneous and less scientifically exact smith's work had, but this is not the fault of the architect controller, as Mr. Starkie Gardner would have us believe, but owing to the mechanical and scientific methods of the age we live in.

It is surely with rare exceptions now that the working smith has either the knowledge or appreciation of his subject sufficient to design unaided anything beyond the simplest composition. Generally speaking, we may say there are no designers now who themselves practise the craft of ironwork, and it is necessary for the architect designer to lead and control, while at the same time encouraging and making use of all the ability which the actual executants may possess. As the only work of reference on a subject of great interest, this beautifully illustrated and perfectly printed volume must prove a most valuable addition to any library.

DAVID BARCLAY NIVEN [*F.*].

THE LIVERPOOL SCHOOL ANNUAL.

The Liverpool Architectural Sketchbook: being the Annual of the School of Architecture of the University of Liverpool. Edited by C. H. Reilly. Nov. 1911. [*Published by the Proprietors of the "Architectural Review," Caxton House, Westminster.*]

The second volume of the Liverpool School Annual demands the serious attention of all interested in the development of English architecture. Not only is the present number an improvement on the last as regards the contents, but it is changed in size and presented in a particularly pleasing form.

Under the direction of Professor Reilly and his able colleagues the school has progressed to such an extent that it ranks to-day among the foremost of our academies. No school of architecture in Great Britain can show greater evidence of the high aims of the professors, or of the energies of the students, such as the present volume contains.

Reviewing a few of the illustrations in order of arrangement, it seems regrettable that such a poor frontispiece should have been selected. Mr. H. C. Bradshaw, judging from his design, has a good sense of grandiose composition, although the selection of ornamental detail and the draughtsmanship mar a fine idea.

The first portion of the volume contains a section devoted to measured work, the post of honour being given to the illustrations of Blenheim Palace, reproduced from splendid drawings by

Messrs. Townshend and Mason. The measured study of the Palais de Justice and the Ecole Militaire in Paris explain the wide scope of the subjects chosen by the Professor for the students to measure. The other measured drawings include the Branch Bank of England, and the Apothecaries' Hall at Liverpool, the Porta Palio at Verona, the Government Buildings at Liverpool, and Trinity College Chapel at Dublin.

The second portion contains a series of designs including mausoleums, monuments, town houses, landing stages, public offices, &c., &c. The remainder of the illustrations consist of important compositions representing the various architectural orders and their accessory details. Some of the drawings exhibit faults both in composition and draughtsmanship such as are inseparable from students' work, but, judged as a whole, a very good standard is maintained.

It is impossible to praise too highly the efforts now being made at Liverpool to raise the quality of architectural design. The academic nature of the training is of the utmost value to the student, inasmuch as it gives him a sound knowledge of classic art of all periods, and teaches him the right application of the same. The system of rendering the measured drawings and designs is a sound one; it directs attention to values of masses and projections, and leads the student to appreciate proportion of parts, irrespective of the allurement of detail. This feature of the thorough training the School affords is most apparent in the exquisitely rendered drawings showing composition in the orders and the elevational drawings of Blenheim Palace.

It is to be hoped that the present volume is the forerunner of many others; that it will be appreciated by practising architects and students goes without saying; and as the principles enunciated therein are more generally followed the stigma attached to modern English architecture will be removed.

A. E. Richardson, *Licentiate.*

REINFORCED CONCRETE.

Ready Reckoners for Reinforced Concrete Designs. By Frederick Rings, C.E. Unmounted, 7s. 6d. net; mounted, 10s. 6d. net. [*Published by the Author at Bank Chambers, 92 Tooley Street, London Bridge.*]

These *Ready Reckoners* are a supplement to a former book, *Reinforced Concrete, Theory and Practice*, written by the same author, and are meant to complete the set of reckoners given in such book. The tables are stated to be based on an assumption of the maximum stresses of 500 lbs. per square inch for concrete and 15,000 lbs. per square inch for the steel, or 600 lbs. per square inch for concrete and 16,000 lbs. per square inch for the steel; but as the safe working stresses allowed in the Regulations made by the London County Council under their General Powers Act, 1909, allow further and increased stresses, it means that a reduction in the sizes given in the tables can be allowed.

There would appear to be several statements which, approximately true in a general sense, seem to require amplification. We would refer more especially to the statement at the top of page 9, as to the protection of the tensile reinforcement, and to the last paragraph on the same page, the former remark hardly agreeing with the total depth of the beam given from the tables. Again, on page 12, the last paragraph but one does not seem to agree with section 55 of the Regulations as issued by the London County Council. But this question of shear members is very briefly touched upon, and presumably for formulæ for columns it is intended to refer the reader to the author's before-mentioned book.

While, therefore, we should consider that these Reckoners may be of assistance to the designer of reinforced concrete structures who understands the subject, or enable an architect to approximate the thickness of his floor slabs and the depths of his beams, we should not altogether endorse the author's statement in his Preface as to the accurate design of Reinforced Concrete Structures by a man without the requisite knowledge of mathematics.

We note that several printers' errors have been corrected, but there is a further one in the omission of the inches on the last line of page 8.

J. Ernest Franck [*A.*].

STRESSES AND THRUSTS.

Stresses and Thrusts: a Text-book for Students. By G. A. T. Middleton, A.R.I.B.A. Fourth edition, revised and enlarged. Lond. 1911. *4s. 6d. net.* [*B. T. Batsford, 94 High Holborn, W.C.*]

A book which has extended to a sixth edition, as is the case with the one under review, the first two editions being under a different title, must surely be considered to have justified its existence. Comment on the utility of the book is therefore superfluous. It is also hardly necessary to state in the case of an author of Mr. Middleton's experience that the present edition is an improvement on the preceding one. The additional material, which consists principally of notes regarding the design of stanchions of I section and the detailed design of a steel roof truss, and a chapter on arches, are all of value to the student. The first-mentioned subject, indeed, is rather briefly treated, having regard to its very great importance in every-day work, but of course, in a small book selling at a popular price, rigorous compression of the material is essential.

A reviewer of a book which is already well received, and of which a further edition may be expected in due course, is presumably justified in making a few suggestions for improvement. There are two points which, to my mind, require

attention. One is the definition of the term "moment of resistance." As used in the portion of the book dealing with steel joists the value termed the moment of resistance is what, in ordinary steel section books, is given the name of "section modulus." I am aware that, in the handbook on steel sections issued by the Engineering Standards Committee, Mr. Middleton can quote chapter and verse for his application of the term. But authorities generally—see, for example, the recent report of the Joint Committee on Reinforced Concrete—have refused to assist the Engineering Standards Committee in the perpetuation of an old error, and it is the general rule to apply the term "moment of resistance" not to a mere property of the section, deducible without reference to the character of the material of a beam, but to the moment of the resisting stresses of a beam. Curiously enough, the author, in his treatment of rectangular wooden beams, uses the term in the correct sense, and thus the methods of treatment on pages 50 and 58 are contradictory.

The other point to which attention is invited is the assumption (see page 149) that a wall when overturning turns about one of the edges of the base. This assumes that the material of the base and the material immediately beneath it are of absolute incompressibility, which is evidently not the case. The question of the stability of walls is admittedly rather a difficult one, but there are other methods of solution that are less obviously open to criticism.

While, in these two respects, improvements would be welcomed, the book, considered as a whole, very creditably fulfils its purpose, and gives the elements of structural mechanics in an easily assimilated form.

HORACE CUBITT [*A.*].

MUNICIPAL WORKING-CLASS DWELLINGS OF VENICE.

Le Case Sane Economiche e Popolari del comune di Venezia. 1911. *Bergamo. Istituto Italiano d' Arte Grafiche.*

In 1893 the Council of Venice instituted a Commission to administer the work of erecting cheap sanitary houses in the various districts of the city. This record of the work of that Commission has been compiled by Prof. Dott. Eugenio Orsoni, the official secretary of the body.

In a general review of the subject with which the book commences, Prof. Orsoni states the various aspects of the question. The problem of the great city is to be met not by a back-to-the-land movement, but by giving to the city those features which make it conform to the dictates of modern scientific thought, public opinion and morality. Where private enterprise is unable or unwilling to provide sanitary housing, the commune must take action. Two modes of interference are possible: indirect—that is, aiding private enterprise; and direct—that is, supplanting it.

The indirect action of the commune of Venice commenced in 1891, when the Council instituted premiums of 0.2 lire for every cubic metre of new building erected on unbuilt areas, and 0.15 lire for every cubic metre of additions to existing buildings. These premiums were raised in the course of a few years, and a new premium offered for houses, formerly insanitary, put into proper condition.

The Savings Bank of Venice by its Constitution must devote a certain amount of its yearly profits to purposes of public utility. In 1893 it was decided to set aside each year for thirty-five years a part of this annual sum and to employ the total proceeds in the erection of cheap sanitary houses. In order that the work might proceed at once, the Commune raised a loan of 500,000 lire on the credit of the funds earmarked by the Savings Bank.

Further sums were voted by the Savings Bank to a total amount of 1,250,000 lire by the Municipality to the total amount of 6,000,000 lire, while rents from property erected amounted to 80,000 lire. In all about 7,300,000 lire has been spent in the construction of cheap houses.

The Commission formed in 1893 to administer the funds was in 1910 transformed into a trust known as the "Istituto Autonomo per le Case Popolari ed Economiche," which was endowed with the funds and the property accumulated by the commission.

The object of the commission is to provide sanitary houses at minimum rents. The rents are based on a return of 4 per cent. on the capital invested, and where the rents are lower than this standard it is held that the funds paid by the Savings Bank automatically apply to increase the return up to the standard.

The houses are let by public advertisement and are periodically visited by official inspectors. Where any untoward circumstances are discovered by the inspectors, notices are sent to the tenants in question.

The houses are arranged in three categories, according to the amenities of the locality and the class of house, the rents of the most desirable houses being about double those of the lowest type. The rents, including water and electric light, in some cases in measured quantities, vary from 10*s.* per 630 cubic feet to 10*s.* per 300 cubic feet per year, and the buildings cost 3*d.* to 5*d.* per cubic foot exclusive of site value.

In the plans of the houses the outer door opens on to a room which might be called an entrance hall, and the other rooms, including the w.c., open off this hall. In some cases the hall is also the kitchen, and in a few others a lobby replaces the hall. The kitchen fire is the only one necessary in each house, and the other rooms do not have fireplaces. Belvederes and gardens are attached to most of the

houses, and all are provided with wash-houses and sanitary conveniences.

The book gives plans and photographs of all the houses built, and statements of the costs, dimensions and accommodation; minutes of the municipal meetings and other documentary matter bearing upon the subject are also included.

Glasgow. VERNON CONSTABLE [*A.*].

CORRESPONDENCE.

Skeleton Frame Buildings.

District Surveyors' Association (Incorporated),
9 Conduit Street, W.: Jan. 19, 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—We shall be glad if you will kindly allow us the use of your columns in order to make an announcement that will, we feel sure, be of considerable interest to architects and others concerned in steel frame buildings.

It is enacted in section 22 of the London Building Act Amendment Act of 1909 (9 Edward VII. cap. cxxx.) that, when it is proposed to erect a skeleton frame building, copies of all the plans, sections, and calculations in detail shall be deposited with the District Surveyor.

As it will manifestly be convenient alike to the architect, engineer, and district surveyor, that these drawings and calculations shall be submitted upon a uniform basis, thus greatly reducing the labour of making and checking the calculations, the District Surveyors' Association (Incorporated) have, with the co-operation of the Science Standing Committee of the Royal Institute of British Architects and others, drawn up a scheme to be adopted by persons depositing plans, sections, and calculations with the District Surveyor.

This scheme is now completed, and copies may be obtained of the Association's publishers, Messrs. Merritt and Hatcher, Ltd., 2 Grocers' Hall Court, E.C., price 2*s.* 6*d.* net.

The scheme provides for a uniform system of nomenclature, the adoption of uniform symbols and uniform calculation sheets for pillars, beams, and foundations. It also contains the formulæ necessary for making the calculations, a schedule of weights of materials, and a number of tables of value. Samples of the various forms are attached.

Yours faithfully,

WILFRED J. HARDCASTLE, *President.*
BERNARD DICKSEE, *Hon. Secretary.*

The Proposed Registration Bill and Absorption of the Society of Architects.

8 Buckingham Street, Strand, W.C.:
11th January 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—After hearing Mr. Gibson's masterly introduction of the motion and listening with profound interest to adverse criticisms of the proposals it involved, some of the members present must have felt, as I did, a desire to hear the views of several other councillors, to whom we naturally look for light and advice in such an important matter. For that reason, the President's apparent wish to adjourn the discussion would have been a good thing, though to refer the matter back to the Council was certainly better than to have taken a vote on the original motion, whichever way it might have gone.

The gravity of the proposals as affecting the Institute, the profession generally, and of course the Society of Architects, became more apparent than ever last Monday evening. Would it be impracticable to have a debate on the whole subject, giving a fixed allowance of time to each speaker? No resolution would be needed. The Council could subsequently decide how to proceed with the matter or to abandon it.

The following points occur to one as being some of the more important on which information would be valuable.

(1) To what extent is the Institute assured of support by the practising architects of Great Britain of such a Registration Bill as now proposed?

(2) Has the Council been advised on the difficulties of getting such a Bill, affecting the public, introduced and passed by a private Member of Parliament?

(3) Has the Council considered the desirability of ascertaining what opposition there might be to the Bill by other professional and public bodies, and of meeting their views if possible?

(4) Were the Council practically unanimous in their views in putting forward the motion, or were they merely doing so to carry out what they deemed to be the wishes of the Institute and profession?

(5) Would our Charter really be imperilled if opposition to a Registration Bill were strong enough to defeat it, or were an opposition Bill promoted and passed by some other body?

(6) Did the negotiations with the Society of Architects indicate their refusal to entertain terms of amalgamation more acceptable to our Associates?

While very few of us can really think the Institute would go to what "Mr. Mantalini" described as the "demnition bow-wows" if the Society of Architects were absorbed on fair terms and an attempt were made to get a Bill through Parliament, the matter evidently requires more consideration. We all ought to unite to find the best solution, and I am sure our Council wish it as much as anybody. It may be that the ultimate good of the profession at large can only be attained by Fellows and Associates sacrificing something

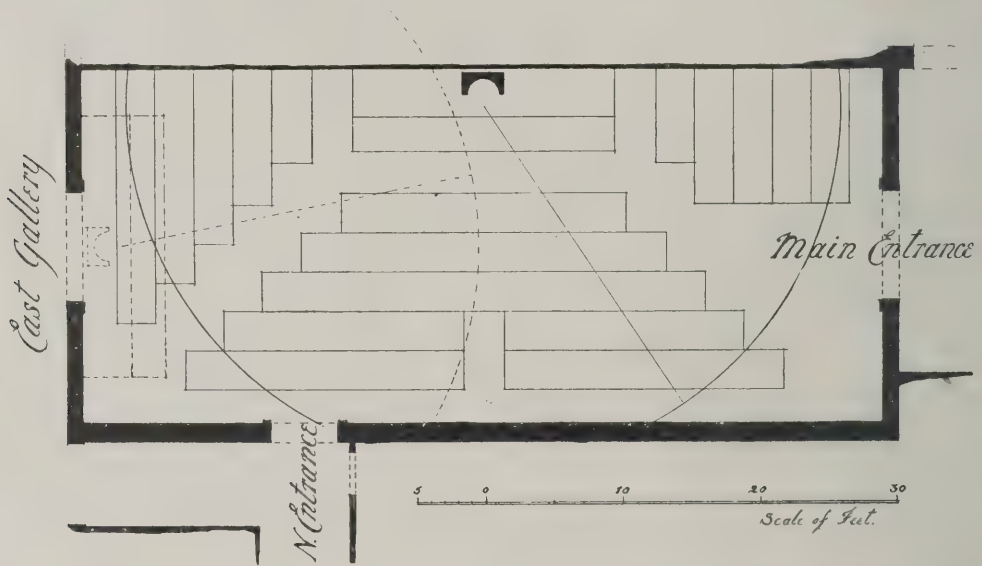
now. Perhaps, at such a debate as I have proposed, the able critics of the original motion would further strengthen the policy of our Council with suggestions of a practical and constructive nature, up to which the various past meetings seem to have been leading.—Yours faithfully,

A. O. Collard [*F.*].

The Institute Meeting-Room: Suggested Re-arrangement of Seating.

To the Editor, Journal R.I.B.A.,—

Sir,—It is no reflection upon Mr. Hare's arduous labours and display of ingenuity in connection with the Institute's new premises to say that there are many who feel that the new meeting-room, spacious



though it be, fails to possess the characteristics which have endeared the Library, in this capacity, to generations of members.

Apart from the rich effect of mural stores of learning, which of course cannot be repeated downstairs, the matter is one of configuration. In the new gallery as at present seated, the President's chair is more than 50 feet from the rear rows of the room, which, notwithstanding the fact that the acoustic properties of the gallery are good, must put a strain on some voices and make it exceedingly difficult for any one addressing the chair from the front of the room to be heard at the back without some discourtesy to the daïs. A room possessing the configuration of a double square is not, perhaps, ideal for a platform at one side, but I venture to submit a plan of such an arrangement which appears to have certain advantages.

On this plan are two curves being segments of the same radius (26 feet), the full line struck from the President in a state of oration in the proposed, and the dotted line in the present, position. It will be seen that while all but four or five of the audience are within this range from the side, less than half of them come within it from the end platform.

With the seating as suggested, every speaker would face the eyes or one ear of every other occupant of the room, and those furthest apart would confront each other with great advantage to oratorical and auditory effect. Further, the Maddox Street entrance, of which little advantage seems to be taken at present, could form an access, if desired, in a position not likely to disturb speakers; and the position of the daïs at the side of the large gallery would admit of its retention on at least some occasions upon which the eastern gallery is required, with some saving in the handling of furniture. Finally, I understand that the re-arrangement suggested would be welcomed by those responsible for reporting the proceedings. The actual seating accommodation would, of course, depend on the gangways, but it would at least be equal to that possessed by the room as arranged at present.—I am, Sir,

Yours, &c.,

Alan E. Munby [*A.*].

"London: the Reiterated Warning."

To the Editor, Journal R.I.B.A.,—

Sir,—As a member of the Shoreditch Borough Council I feel that Mr. Crow has done that Council an injustice in his interesting article [Journal, 13th January].

Norton Folgate has been widened up to the City boundary at the joint expense of the London County Council and the City Corporation largely to provide a new tram route to avoid passing Spitalfields Market, the City Corporation no doubt contributing in the belief that the widening was desirable in the interests of the citizens.

Beyond the City Boundary the Shoreditch

Borough Council is the local authority, and that Council refused, and rightly in my opinion, to bear any portion of the cost of widening, other than its proportion as a Metropolitan Borough Council and therefore a bearer of the central rate, on the grounds that the widening was a Metropolitan improvement and of no special benefit to the ratepayers of the Borough of Shoreditch. In consequence a "noble improvement" is blocked, but it is by the London County Council, who can proceed by bearing the whole cost, since the Shoreditch Borough Council is *not* "in a position to hold up the improvement and the traffic at its own free will" if that course is adopted.

The trams and other traffic using this road only pass the fringe of the Borough of Shoreditch, practically all the traffic passing to Hackney, Bethnal Green, and Stoke Newington.—Yours faithfully,

GILBERT H. LOVEGROVE, *Licentiate.*

Contemporary Information relating to Sixteenth, Seventeenth, and Eighteenth Century Architects.

From HARRY SIRR [*F.*],—

A list of architects who competed in the latter half of the eighteenth century may not be out of place under the above heading. Such a list is found in *Anthologia Hibernica*, April 1793, in the following form.

A LIST OF THE SEVERAL PLANS OF THE ROYAL EXCHANGE, DUBLIN, DELIVERED TO THE TRUSTEES FOR THE INSPECTION OF THE PUBLIC IN 1769.

1. William Ivory: Norwich.
2. James Gandon†: London.
3. Stephen Riou: Canterbury.
4. T. M. T.: Dublin.
5. John and Samuel Hope: Liverpool.
6. I. Jenkins: London.
7. — Everard: London.
8. Timothy Lightoler: Chester.
9. Robert Mack: Dublin.
10. N. J.: Dublin.
11. Thomas Rawlins: Norwich.
12. W.: Ireland.
13. J. Leroux: London.
14. John Fellow: Southwark.
15. J. T.: London.
16. James Workman: Cavan.
17. 18. Mr. Ivory, 2 designs: Dublin.
19. Messrs. Myers and Sproule: Dublin.
20. 21. William Barber, 2 designs: Dublin.
22. Praeter laudem nullius avarus: —
23. Philotechnos B.: —
24. 25. Oliver Grace, 2 designs: Dublin.
26. Hibernicus and Amator Patriae: —
27. Francis Sandys: Dublin.
28. J. C.: London.
29. 30. 31. Thomas Jarrat, 3 designs: Dublin.
32. J. W. L.†: London.
33. Peter de la Roche: London.
34. T. S.: London.
35. Thomas Cooley†: London.
36. R. Edwin: London.
37. Edward Stevens†: London.
38. Thomas Cruden: London.
39. William Donn†: London.
40. James Lovel: London.
41. Thomas Wiggins: London.
42. ⊙ B.: London.
43. ⊙ A.: London.
44. Thomas Sandby†: London.
45. George Richardson: London.
46. William Blackburn: London.
47. John Whiscard: London.
48. Anthony Chearnly: London.
49. Richard Louch: London.
50. Arthur Blackhall: London.
51. † : London.
52. 53. William Rigby Naylor, 2 designs: London.
54. William Newton: London.
55. John Byrne: Dublin.
56. Rowland Omer: Dublin.
57. Michael Priestly: Londonderry.
58. Edward Johnston: Londonderry.
59. Vitringa: Dublin.
60. William Beauford: Dublin.
61. Lodge, No. 158: Dublin.

Those marked † were esteemed to be the best by the trustees.

It appears that Thomas Ivory was not the only competitor who sent two designs (as I supposed in an article in the *Architectural Review*); indeed, another architect (Thomas Jarrat, of Dublin), sent three designs.

THE SMITHSONS AND WOLLATON HALL.

The Report on Lord Middleton's Manuscripts at Wollaton Hall mentions, with reference to the building accounts, 1582 to 1588, that there are several payments to Smithson as imprest for taskwork, "but there is nothing to show that he acted as 'architector' in the modern sense, as he has been said to have done on the authority of his epitaph in Wollaton Church. There is, however, nothing in the accounts to disprove that he held this position. In 1587 the payment to him is said to be 'pay owte for taske worke.'"

In 1585 (14th February) there are payments to divers men, including Robert Smithson. The collection includes "A plot for the Glassehouse, July 30, 1615. Ihon Smythson."

Books Received.

The Architect's Library. A History of Architectural Development. In three vols. Vol. III. The Renaissance in Italy, France, and England. By Professor F. M. Simpson, F.R.I.B.A., with 268 illustrations. La. 8o. Lond. 1911. Price 21*s.* Longmans, Green, & Co., 39 Paternoster Row.

A Short History of the British School at Athens, 1886–1911. By George A. Macmillan, Hon. D.Litt. (Oxon.). Together with a Bibliography of the Work of Students of the School, compiled by J. ff. Baker-Penoyre, M.A., and Miss C. A. Hutton. 4o. Lond. 1911. Macmillan & Co., Limited, St. Martin's Street.

British School at Rome: Eleventh Annual Report of the Managing Committee, 1910-11.

9 Conduit Street, London, W., 27*th Jan.* 1912.

COMPETITIONS.

Winnipeg Legislative Buildings Competition.

The Minister of Public Works, Manitoba, has addressed to the Secretary of the Royal Institute the following cablegram with reference to the above competition: "Date for acceptance of plans extended to 31st March."

Competitions for Town Planning, Garden Suburb Schemes, &c.

Acting on the recommendation of the R.I.B.A. Competitions Committee, the Council of the Royal Institute give notice that in the case of competitions for Town Planning, Garden Suburb Schemes, and kindred enterprises, the competition amongst architects should be confined to the design, and architects should not undertake the erection of the buildings they have designed for competition purposes. Further, the Council are of opinion that members of the Royal Institute should not act as assessors to or otherwise countenance a competition unless it is limited to the design only.

CHRONICLE.

THE PRIZES AND STUDENTSHIPS 1912.

The Council's Award.

The Designs and Drawings submitted for the Institute Prizes and Studentships are now on exhibition in the R.I.B.A. Galleries (9 Conduit Street, W.). The Council's Deed of Award, read at the General Meeting of the 22nd January, gives particulars of the competitions and the results thereof as follows:—

The Royal Institute Silver Medals.

(i.) *The Essay Medal and Twenty-five Guineas.*

Twelve Essays on "The Principles to be observed in Designing and Laying out Towns, treated from the Architectural Standpoint," were received for the Silver Medal under the following mottoes:—

1. "Cacoëthes Scribendi."
2. "Clepsydra."
3. "Heretic."
4. "Intra Muros."
5. "Moonstone."
6. "Mutamur."
7. "Redundancy."
8. "Renascence."
9. "Rus in Urbe."
10. "Swiveller."
11. "Usui Civium Decori Urbium."
12. "Yass-Canberra."

The Council have awarded the Medal and Twenty-five Guineas to the author of the Essay submitted under the motto "Redundancy" [*T. Harold Hughes*].

(ii.) *The Measured Drawings Medal and* £10 10*s.*

Five sets of drawings were sent in of the various buildings indicated, and under mottoes as follow:—

1. "Arno": 6 strainers (Church of Santo Spirito, Florence).
2. "Bee": 4 strainers (Palazzo Chiericati, Vicenza).
3. "Shopeinshoudes": 5 strainers (The Octagon, Ely Cathedral).
4. "Sphinx": 3 strainers (Cork Male Prison).
5. "Zeta": 6 strainers (Compton Wynyates, Warwickshire).

The Council award the Medal and Ten Guineas to the author of the drawings submitted under the motto "Zeta" [*Arthur Edwin Maxwell*], and Certificates of Hon. Mention to the authors of the Drawings submitted under the mottoes "Shopeinshoudes" [*A. B. Allen*] and "Arno" [*Walter M. Keesey*] respectively.

The Travelling Studentships.

(i.) *The Soane Medallion and* £100.

Thirteen Designs for a Guildhall were submitted under the following mottoes:—

1. "Antæ": 10 strainers.
2. "Circle City": 7 strainers.
3. "Dragon": 6 strainers.
4. "Experientia Docet": 7 strainers.
5. "Fraternity": 8 strainers.
6. "Guild": 9 strainers.
7. "L'Inconnu": 6 strainers.
8. "Mafie": 6 strainers.
9. "ΟΥ ΤΟΠΟΣ": 8 strainers.
10. "The Sign of the Black Fish": 6 strainers.
11. "Vista": 8 strainers.
12. "Vitæ": 9 strainers.
13. "Sailing Ship" (device): 7 strainers.

The Council regret that they are unable to award the Soane Medallion, but they award a Certificate of Hon. Mention and the sum of Fifty Pounds each to the authors of the Designs bearing the mottoes "Circle City" [*William Friskin*] and "Antæ" [*Piet de Jong*], on the condition that the authors make a three months' tour on the Continent in accordance with the conditions attached to the Prize. They also award Certificates of Hon. Mention to the authors of the Designs bearing the device and motto respectively of "Sailing Ship" [*C. A. Harding*] and "Vista" [*Bertram Lisle*].

(ii.) *The Owen Jones Studentship and* £100.

Two applications and Drawings were received from the following:—

1. Noël H. Leaver: 5 strainers.
2. Geo. W. Mason: 6 strainers.

The Council have awarded the Certificate and (subject to the specified conditions) the sum of One Hundred Pounds, to *Mr. Noël H. Leaver.*

(iii.) *The Pugin Studentship and* £40.

Nine applications were received for the Pugin Studentship from the following:—

1. C. Peake Anderson: 4 strainers.
2. A. M. Durrant: 4 strainers.
3. Joseph Hill: 4 strainers.
4. W. J. P. Jones: 4 strainers.
5. J. R. Leathart: 4 strainers.
6. Charles Waite: 3 strainers.
7. Jas. Macgregor: 4 strainers.
8. R. Norman Mackellar: 4 strainers.
9. F. H. Swindells: 4 strainers.

The Council have awarded the Medal and (subject to the specified conditions) the sum of Forty Pounds to *Mr. James Macgregor*, and Certificates of Hon. Mention to the following, who are bracketed as equal:—*Mr. C. Peake Anderson, Mr. W. J. P. Jones, Mr. J. R. Leathart*, and *Mr. R. Norman Mackellar.*

(iv.) *The Godwin Medal and* £65.

Two applications were received for the Godwin Bursary from the following:—

1. Geoffry Lucas.
2. A. F. Wickenden.

The Council have awarded the Medal and (subject to the specified conditions) the sum of Sixty-five Pounds to Mr. Geoffry Lucas.

(v.) *The Tite Certificate and* £30.

Eleven Designs for the Central Courtyard of a Royal Exchange covered with a roof were submitted under the following mottoes:—

1. "Ambitus": 6 strainers.
2. "Black Cat": 6 strainers.
3. "Centres": 5 strainers.
4. "Dum Spiro Spero": 5 strainers.
5. "Ego Fecit": 6 strainers.
6. "Gregalah": 3 strainers.
7. "Hampton Palliolaers": 6 strainers.
8. "IKKI": 5 strainers.
9. "Φερω-κονκρητε": 6 strainers.
10. Red Lion (device): 6 strainers.
11. "The Circle": 5 strainers.

The Council have awarded the Tite Certificate and (subject to the specified conditions) £30 to the author of the Design bearing the device "Red Lion" [*Louis de Soissons*], and a Certificate of Hon. Mention to the author of the Design bearing the motto "The Circle" [*Thomas H. Chalkley*].

THE ARTHUR CATES PRIZE: FORTY GUINEAS.

Three applications were received for the Arthur Cates Prize from the following:—

1. J. B. F. Cowper: 4 strainers.
2. Claude Y. Hodges: 6 strainers.
3. Maurice Lyon: 6 strainers.

The Council have awarded the prize to *Mr. James Bertie Francis Cowper.*

PRIZES FOR DESIGN AND CONSTRUCTION.

The Grissell Gold Medal and £10 10*s.*

Four Designs for an Isolated Exhibition Building were submitted under the following mottoes:—

1. "M·CM·XII": 6 strainers.
2. Fleur de Lys (device): 2 strainers.
3. "P. O. M.": 3 strainers.
4. "Fer dans Blanc Mange": 2 strainers.

The Council have awarded the Medal and Ten Guineas to the author of the Design bearing the motto "M·CM·XII" [*Thomas Braddock*].

THE ASHPITEL PRIZE 1911.

The Council have, on the recommendation of the Board of Architectural Education, awarded the Ashpitel Prize (books, value £10) to *Mr. Philip Dalton Hepworth, Probationer* 1907, *Student* 1910, who passed the Final Examination in November 1911.

THE TRAVELLING STUDENTS' WORK.

Pugin Student 1911.—The Council have approved the Drawings executed by *Mr. James Bertie Francis Cowper*, Pugin Student 1911, who travelled in Northamptonshire, Rutlandshire, Lincolnshire, and part of Norfolk.

The President and Council's "At Home."

Some 400 members and Licentiates were present at the "At Home" given by the President and Council, and held in the Institute Galleries on Wednesday the 24th inst. A much larger number had intimated their intention to be present, but many were doubtless prevented by the heavy downpour of rain which set in towards evening and lasted till late at night. The President was unable to be present owing to indisposition, and his place was taken by the senior Vice-President, Mr. Reginald Blomfield, A.R.A. The feature of the evening was the exhibition of the designs and drawings sent in for the current year's Prizes and Studentships, the Council's award of which had just been made public. The works fill the entire wall space of the Galleries devoted to the exhibition, and make a very interesting and effective show. The opportunity of viewing them under the happy conditions of the evening was very much appreciated, especially by the numerous country members present.

Notice to Licentiates.

The revised programme of the Examination of Licentiates desiring to qualify for candidature as Fellows is now ready, and may be obtained on application to the Secretary R.I.B.A. The first Examination will take place towards the end of June or the beginning of July next.

Æsthetic Treatment of Concrete.

On the 8th February Professor Beresford Pite will read before the Concrete Institute a Paper on "Æsthetic Treatment of Concrete." It is expected that there will be a good attendance of engineers on this occasion, and it is desired by the Concrete Institute that the profession of Architecture should be adequately represented. The Council of the Concrete Institute have courteously extended to the members of the Royal Institute of British Architects a general invitation to attend the meeting.

Architecture and Painting.

Sir Alfred East's Paper read at the Institute last Monday furnished the text for a well-informed leader in *The Times* of the 25th inst., from which the following is quoted:—

The application of colour to architecture is a problem which has never, perhaps, been completely solved since architecture ceased to be the dominant art having a complete control of other arts. Even in the case of the greatest examples of Italian mural painting we are apt to forget the architecture in looking at the pictures. The Sistine Chapel seems to exist for its frescoes, although they are admirable decoration. The Medici Chapel in Florence is only a delightfully painted room. The Scuola di San Rocco is a picture gallery, and so is that part of the Vatican adorned by Raphael's frescoes. In all these cases the painter is predominant; and, however wonderful or delightful his work may be, the problem of the application of colour to architecture is not solved because the building only exists to provide a surface for pictures. Further, these triumphs of painting have misled the art of pictorial decoration ever since. Wherever it has been practised, the architect and the painter have usually worked as independent artists, each with a different aim. After the architect has finished with a building the painter has entered it and done what he could to turn it into a picture gallery; and often a number of different painters have been employed, as in the Pantheon in Paris, or in our own Houses of Parliament, each of whom has painted his own picture, with as little regard for the rest or for the building itself as if he were painting an easel picture for an exhibition.

Now, it is quite certain that, where colour is used at all to decorate a building, it should be used systematically throughout. The effect of a series of mural paintings in a large interior otherwise uncoloured is merely to distract the eye from the whole interior to the patches of painting. Considered in their relation to that interior they are, however excellent as pictures, mere irrelevant masses of colour, which, as Sir Alfred East remarked, usually conflict with the architectural effect of the whole. In fact, the finer the interior as architecture, the more irrelevant and distracting do mural paintings usually appear. There is a discord of two arts where there should be a harmony, or where one should reign alone. And yet whenever architecture has been the predominant art it has nearly always used colour as an instrument of its own, whether in the form of paint or mosaic or stained glass. But in such cases the decorator has been either the servant of the architect or subject to an architectural tradition which entirely controlled the practice of his own art; and this tradition has always been of the greatest possible benefit to the decorator, preserving him both from mere virtuosity and from prosaic imitation. Medieval stained-glass windows, for instance, are beautiful both in colour and in design because they are always conceived both as windows and as a system of colour decoration to the whole interior. Nor did this tradition of subordination prevent either windows or mosaics from being in the highest degree expressive and interesting in themselves. Indeed, it was only when they began to imitate pictures that they became dull. For them service was perfect freedom; and independence meant slavery to laws which did violence to their whole nature.

The moral, then, is that the architect should always be the master of his own house; but unfortunately architects have so long ceased to think of colour decoration as their business that it is not natural to them to design in colour; and a building which is not made to be coloured cannot be coloured satisfactorily. Sir Alfred East remarked that in many decorated public buildings the areas of the different colours employed were not in keeping with the scale of the building. In such cases the decorator often has an impossible problem because the architect, in designing his building, has not seen it coloured. We may doubt, for instance, whether Wren ever in his mind's eye saw St. Paul's coloured. He probably, like so many great Renaissance architects, designed entirely in spaces. In fact, our specialisation of the arts makes their complete harmony at present impossible, because the architect is not a colourist and cannot exercise the necessary control over colour, at any rate in ambitious buildings. Therefore, if we are to learn how to apply colour rightly to buildings, we had best begin as unambitiously as possible upon interiors with little architectural pretension. But the painting in such a case must be as unambitious as the architecture. We do not want a hall or a schoolroom decorated with pictures of Boadicea preaching revolt against the Romans, or of Eternity giving lessons to Time. Indeed, we do not want pictures painted upon the walls at all. Rather we want the walls decorated as the old illuminators decorated books, without pictorial illusion, but with a happy mixture of things both interesting to the artist and appropriate to the place. The modern artist, wherever he paints, is judged by his power of making framed pictures and of producing both the kind of composition and the kind of illusion to which we are used in framed pictures. But the decorator must not be so judged, and he must forget the framed picture altogether. As he paints on a flat wall, he has no need to produce any illusion of space or to provide any background. The figures and objects he represents should be pictorially related to each other only by their pattern; and he should try to give them life and interest, not by means of any illusion imposed upon them, not by lighting or atmosphere, but by their own vivacity and character. Modern decorative painting is apt to be too solemn and abstract. There is no reason why a figure painted on a wall without background should always look tired of life or shocked by the vulgarity of reality. The artist freed from pictorial trammels ought to exult in his freedom and paint everything as if he loved it, not as if it were merely a factor in some pictorial problem. If he does this he will probably be accused of vulgarity or incompetence; but at the same time he will interest the public even if they laugh at his work, and he will also be laying the foundation, however humbly and crudely, of a sound tradition of mural painting, which may in time be put to loftier uses.

The Newer Responsibilities of Architects.

The transposition of a line, through a printer's blunder, in Mr. W. Henry White's Paper on "The Newer Responsibilities of Architects" (JOURNAL, 13th Jan. 1912] makes unintelligible the middle paragraph on p. 160, and the author's point is likely to be altogether missed. The paragraph should read :—

"But does the policy of the Institute, in what amounts to withholding the architect's name from the public as far as possible, assist them to a knowledge that there are good, bad, and indifferent architects as shown by their works ? True, a few prominent men obtain a certain amount of recognition when some big building is 'written up' in an evening paper, but to the man in the street who daily passes all sorts of buildings upon which he can learn the name of the builder and numerous sub-contractors, but where the name of the architect must not appear under all sorts of pains and penalties, there is no means of ascertaining the architect's name or anything about him. In all probability a large majority of the public think the *builder* is responsible for the design ! This is rank heresy no doubt, but if the Institute wishes to foster in the public an interest in architecture let it insist upon the architect's name being indicated and regulate how and what notices as to builders &c. should be shown for the information of the public, and in this manner help to interest and educate them. It is certain that most work is placed in the hands of architects by influence rather than by knowledge on the part of the public."

Khartoum Cathedral.

The new Cathedral at Khartoum, which was consecrated on the 26th inst., and of which Mr. R. Weir Schultz is the architect, is designed in the form of a Latin cross. The nave and chancel are the same width, about 26 feet, with the addition of narrow passage aisles on each side, so that the total width over the walls is about 42 feet. The north transept forms the Gordon Memorial Chapel, and will be used for week-day services. The principal entrance is at the west end, the doorway being at the level of the ground outside, with a broad flight of steps inside leading to the narthex or inner porch. This great entrance will be used on occasions of State and special ceremonial, the usual entrances being from the north and south through covered porches into the narthex. Over the narthex, which extends the full width of the Cathedral, a gallery will be erected at some future date. Two circular staircases at the eastern corners of the building lead to a crypt, containing vestries for the clergy and choir and a room for meetings for Church purposes. The main feature of the interior is a series of pointed stone arches crossing the building at regular intervals, filled in with simple brick vaulting. The windows are placed well in from the outer face of the side walls, thus allowing the construction of an external ambulatory above the passage aisles and all round the church. This arrangement protects the windows from the direct rays of the sun, while the ambulatory gives a pleasing effect of light and shade to the walls. The stone used in the building is sandstone of two colours, yellow and pale red, which has been procured from Jebel Auli, adjoining the White Nile, about twenty-eight miles from Khartoum. The floor of the sanctuary is laid with Sudanese marble, and it is hoped that eventually funds will allow this marble to be used for the floor throughout. The roof, which is to be covered with green glazed corrugated tiles, is laid to a slope with projecting eaves. The church is lighted by means of small electric lamps. The design includes a tower to contain a peal of bells, but this, with other work, is postponed until sufficient funds are provided. A view of the exterior of the building is given in *The Times* of the 26th inst.

Artists' Rifles.

The Artists' Rifles are organised as a regular unit in the Territorial Force as the 28th Battalion County of London Regt., and are not only an Officers' Training Corps. The corps is maintained with the special object of providing for the training of members of the special genus of young man from which it is recruited, whose wish is to serve their country after leaving university or school, not necessarily as officers, but as adults in the ranks. It has the best of reputations for practical hard work and discipline, and many of its members pass annually from its ranks to take commissions in other units of H.M.'s service. It has to provide ten per cent. of its strength as officers on mobilisation. The "C" and "E" Companies are traditionally reserved for architects and are called the "Architectural Companies." Details as to qualification to join, &c., will be forwarded on application to the Adjutant, Head-Quarters, Artists' Rifles, Duke's Road, Euston Road, and a personal visit would be welcomed by Walter C. Horsley, Colonel Commanding.

Egypt Exploration Fund.

The Egypt Exploration Fund is this year continuing its work at Abydos for the fourth season under the direction of Mr. T. E. Peet. Excavations have been in progress for some weeks in the great cemeteries for which Abydos was famous in ancient Egyptian days. Tombs of all periods have been opened, beginning with those which date from the very earliest days of the first dynasty and ending with those of the Roman period. Of the latter a magnificent example was found. It consisted of a vaulted chamber, some 20 ft. in length, built of mud bricks and originally almost hidden in the sand. The building of another similar tomb over it at a slightly later date had saved it from

the plunderer. On its floor lay twelve heavy coffins of limestone, each with its carefully sealed cover. Within each lay the mummy, carefully and laboriously wrapped in its linen bandages, the blue and gold of its painted coverings as fresh as when laid in the tomb two thousand years ago. At another spot in the great cemetery was found the skeleton of a woman buried deep in the sand. She had evidently been buried decked in all her jewelry, for on her wrists were bracelets of cowries and beads of carnelian, while on her finger was a ring of five fine scarabs, one of which bears the cartouche of Sheshonk, or Shishak, the Egyptian king of the twenty-second dynasty who sacked Jerusalem in the time of Rehoboam. Under her head, which still preserved the long dark hair, was a veritable mass of ornaments, scarabs, shells, pebbles, copper and iron rings, and beads of every kind. Lastly, on the nose still lay the small nose-ring of silver. Not far from her was unearthed a more ancient burial, probably of the twelfth dynasty; the skeleton was that of a woman. Near the head were two alabaster vases, which still hold the kohl with which she used to paint her eyes. Round her neck was a long necklace of beads and at her left hand three scarabs, one being of fine amethyst, a stone not usually met with, used for scarabs after the time of the Middle Kingdom. On the arrival of the Director of the excavations, Dr. Henri E. Naville [*Hon. Corr. M.*], the scope of the work will be extended and the clearing of the Osireion, the great underground temple of Meneptah, will be begun.

Obituary.

Franc Sadleir Brereton, who died on the 4th December last in his seventy-third year, had been a Fellow of the Institute since 1882. Previous to entering the profession Mr. Brereton held a commission in the 60th (King's Royal) Rifles, and saw service in China, India, and South Africa. In 1865, when twenty-seven years of age, he commenced to study for the profession of architecture in the office of Mr. F. R. Beeston, and was engaged on competition designs for the Bristol Law Courts. In 1867 he commenced independent practice, and was appointed architect to the Wandsworth and Clapham Union, and designed their new infirmaries. In 1868 he entered into partnership with Mr. F. R. Beeston and his son, Mr. F. Beeston, and in conjunction with them supervised the erection of the infirmaries above mentioned. In the same year he was appointed architect to the Fulham Union and prepared designs for the erection of its infirmaries. The partnership was dissolved in 1873 and he continued to practise alone. Among his works at this period were show-rooms and warehouses for Messrs. Chappell & Co., New Bond Street; also a large number of houses and business premises. Later he was joined in partnership by his eldest son, who now carries on the practice. Mr. Brereton served on various committees of the Institute, and in conjunction with the late Mr. W. G. Lemon, LL.B., represented the Borough of Lewisham on the first London County Council.

King's College (University of London): Lectures on Christian Art.

The remaining lectures on Christian Art have been arranged as follows (Wednesdays at 5 p.m.):—

Jan. 31: "The Art of the Catacombs," by Dr. J. Paul Richter.

Feb. 7: "The Christian Churches of Western Mesopotamia," by Miss Gertrude Bell.

Feb. 14: "The Classic Age of Byzantine Art and the Architecture of Justinian," by Professor W. R. Lethaby [*F.*].

Feb. 28: "Minor Christian Arts," by Mr. O. M. Dalton, Mediæval Antiquities Department, British Museum.

Admission is free by ticket to be obtained from the Secretary, King's College, Strand, W.C.

The New Capital of India.

It is officially stated, according to *The Times* Calcutta correspondent, that until the best European architect and sanitary engineer obtainable, both to be selected by Lord Crewe, have visited Delhi before and during the rains, the Government will select no site for the new capital, but will merely acquire land. A committee will subsequently sit to supervise the plans that have been agreed upon.

MINUTES. VI.

At the Sixth General Meeting (Ordinary) of the Session 1911–12, held Monday, 22nd January 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 32 Fellows (including 12 members of the Council), 53 Associates (including 2 members of the Council), 5 Hon. Associates, 21 Licentiates and numerous visitors—the Minutes of the Meeting held 8th January 1912, having been printed in the Journal, were taken as read and signed as correct.

The Hon. Secretary announced the decease of Henry Bloomfield Bare, of Liverpool, *Fellow*, elected 1882.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President, viz.: Francis Harold Swindells, Harold Ian Merriman, Frederick Edward Mennie, Adrien Denis Leroy, Alfred Francis Collins, William Beswick, Llewellyn Ebenezer Williams, Kenneth Stephen Broad, Charles Davis, John Edgar Bullock, Maurice Lyon, *Associates*; George James Morriss Viner, Stanley Parker, Lionel Francis Crane, Joseph John Clark, Thomas John Fox, *Licentiates*.

Papers on "Colour as Applied to Architecture" having been read by Sir Alfred East, A.R.A. [*H.A.*], and Mr. Edgar Wood [*F.*], a vote of thanks, moved by Professor Gerald Moira [*H.A.*] and seconded by Mr. J. D. Crace, F.S.A. [*H.A.*], was passed to them by acclamation.

The Secretary having read the Deed of Award of Prizes and Studentships, 1911–12, made by the Council under the Common Seal, the sealed envelopes bearing the mottoes or devices of successful competitors were opened and the names declared.

The proceedings closed, and the Meeting separated at 9.55 p.m.

RIBA Architectural Library

ADDRESS TO STUDENTS.

Delivered by the President, Mr. Leonard Stokes, at the General Meeting of the Royal Institute, Monday, 5th February 1912.

A YEAR ago I made a promise which I am breaking to-night. I remember it if you do not, so I am not going to plead forgetfulness, but only that I have been advised that my promise was an unwise one, which had better not have been made, and so had better not be kept. As I have failed therefore to produce for you an address to students, from a student, I will try to take myself back rather more than a quarter of a century to my own student days, and tell you, if I may, a few of my own experiences and mistakes : for though at the time I was not of an age when mistakes are generally made, or at any rate admitted, yet now I can see very well that I was not quite so infallible as I thought myself to be at the time. Take warning, therefore, and remember that it has been very truly said that even the youngest of us may make a mistake! Well, my first one was that I began my architectural life much too young, and without proper preparation, but as my health broke down time after time at school, and as I had a taste for building rabbit-hutches and drawing tracery-windows with a pair of compasses, a kind friend suggested that an architect's office was a nice easy place to be in—he was by way of being an architect himself and should have known better—and that as no examinations were necessary I could easily become an architect! So without more ado I was articled for three years. There may have been some excuse in my case, but from personal experience I can say that no young architect should begin his career without a thoroughly good all-round education. Whether, from an architectural point of view, he should go to one of the Universities or not, I am not prepared to say, but from a worldly aspect I feel sure he would be wise to do so.

But to return to my mistakes, the first thing my master, who was quite a good architect in his way, asked me was, whether I preferred Gothic or Classic architecture. Well, I thought of my rabbit-hutches and my tracery-windows and answered " Gothic "! The result was not what I expected, for I was set to cut my teeth on " the Orders," and as I could not use my instruments at all properly you may imagine what I made of them. Of course I should have been taught to draw, and a good many other things besides, before I ever tackled " the Orders " at all—as is now so well done in architectural schools—but as a matter of fact, after the first few months, I never looked at them again, at least not for many a long year.

My master was an old Architectural Association man, and a great believer in that body, so I was told I must join and look forward to holding some office in it as he had done. That was my first ambition. Well, the " Brown Book " was studied, and, as the subjects in the Advanced Class of Design seemed easier than those in the Elementary Class, I plunged into the Advanced Class without more ado, which, of course, was a great mistake, for whereas my first design was for a cricket pavilion—which taught me next to nothing—I might have been

put through my facings on "an Atrium to a Roman House" in the Elementary Class, for which I should have had to look up some authorities, and go into the subject properly and refer to my old friends, "the Orders." But not having had any proper schooling, I must needs try a short cut to architectural fame!

This, of course, was the greatest of all mistakes, for the older I get the more certain I am that a good grounding in things architectural is absolutely necessary: so, if you will be advised by me, you won't try any short cuts whatever, but go steadily on up the ladder, round by round, from the bottom to the top, and if on looking back you remember having on occasions taken two or three rounds at one time, go back at once, however near the top you may be, and go over them again, one at a time, before it is too late, for we cannot be too thorough in our studies if we want to be authorities in after life.

And if we want to be thorough we must cultivate our observation on all occasions. In my nursery days I well remember a little story we were very fond of, called *Eyes and No Eyes*. There was a good little boy—"Eyes"—who noticed everything, and his walks were full of interest, for he saw the cows milked, heard the birds sing, and smelt the flowers, whereas "No Eyes" came home having been impressed only by the hardness of the road and the length of his walk! Now life is full of "Eyes" and "No Eyes"—principally "No Eyes"—and the "Eyes" get on, and "No Eyes" do the reverse, particularly amongst architects, for what are we without observation? Is not our one way of learning how to produce desired effects to find out how others have done what we want to do, and to make quite sure how they did it? Do we not measure every inch of the admired object so that we may have it on paper, and by comparing the drawing with the original make ourselves able to judge work the other way round; *i.e.* by beginning with our paper work, knowing in our mind's eye what it will look like when produced in bricks and mortar? "Eyes" can do this; "No Eyes" can't.

Of course a sense of proportion is a very valuable gift, whether it can be taught or not I should not like to say; but observation will help us a great deal, and not only observation of the object itself, but also of its position, material, and surroundings, for it is obvious that a slender column which might look right in a screen would look quite wrong carrying a large building, so that we must use judgment with such rules as we have, and to get judgment I contend we must train our own eyes and not depend on other people's.

My three years of pupilage being over, I went by advice into a quantity surveyor's office for a year; and perhaps the only thing I ever learnt thoroughly in my life was how to "square dimensions"! for I spent "six months hard" at it. I also learnt how to tick abstracts and a few other accomplishments which have been of no use to me since, except that I now have a general idea of what there should be in a bill of quantities—only too often to find that it is not there! While in the surveyor's office I had a month's holiday, which I used largely in measuring up a fine old church, the drawings of which got me into the Architectural School at the Royal Academy as a probationer, but of course when I got into the schools I found that I knew much more than my masters—a fatal thing, but I was still very young! The teaching in those days, however, was a very perfunctory performance. Each student got—if he was lucky—a few minutes' criticism once a week from the visitor! While, in my case, what I wanted was solid hours of instruction! But I suppose it was my own fault for going to the wrong shop?

While in the schools, I made several vain attempts to win a big prize. The first time I think I might have had a chance, but for a much better and more elaborate design. This elaborate design not only lost me that prize but perhaps the next one also. For the second time I thought that elaboration evidently fetched the R.A.'s, so I would be elaborate, and I was! But Leighton, in giving out the prizes, said there was a want of "expressional fitness" about some of the designs—and there no doubt was! Elaboration had failed, so

next time "expressional fitness" was my one idea! But this did not come off either! The mistake I made after my first attempt was not going quietly on doing the best I could without any regard to my judges, or, at any rate, to my idea of them.

Take warning, therefore, and never—whatever you do—either play up—or down!—to your judges, even if they are the Council of the R.I.B.A. Do justice to yourself and yourself only, and never bother about anyone else—until you get a client; and then, unless you have luck, you may perhaps even wish you hadn't got him.

After I had finished my year's quantity surveying—*i.e.* about the time I got into the Academy Schools, I went for nearly a year as clerk of the works on a big building, and saw a certain amount of life and its wicked ways in the building line; and then about another year or so at office work, during which time I won my only prize—the Pugin—more by good luck than anything else, for there were two other men better than I was, but they were so equal that the judges could not make up their minds which was the best, so they gave it to me! Much to my surprise, for although I had sent in some good honest work I knew that either of the two other men was more likely to get it than I was, but I wanted to get my hand in, for perhaps the following year.

Another mistake I made was to avoid the examinations established by this Institute by joining as an Associate amongst the last batch who were elected without examination, instead of even then taking to my books and fitting myself in the only right way—for a youngster—to become a member of this Institute.

I have now described to you my student days proper, and will let you off the old platitude about being a student all my life. The only thing that I have omitted to mention is that for about three months in each of four years I travelled; twice in England and twice on the Continent, my only regret being that the bulk of my work was not more serious and not quite so sketchy, but in common with other students my eye was caught by bits of pretty detail, and, instead of worrying out the general scheme and construction of a fine piece of work, some dodgy little corner which made a pretty sketch was too often selected.

Now the lesson I want you to learn from all this is that I was too young, and not half equipped for anything, at the time I attempted it, and that I drifted into practice long before I should have done, and here I am in the Chair holding forth to you some ten or fifteen years too soon: not that ten or fifteen years can make any difference to me now, but properly spent at the beginning of my career they would have enabled me to address you this evening with much greater advantage and profit to yourselves as students.

CRITICISM OF DRAWINGS SUBMITTED FOR THE INSTITUTE PRIZES AND STUDENTSHIPS 1911–12.

By Gerald C. Horsley [*F.*], President of the Architectural Association.

Read before the Royal Institute of British Architects, Monday, 5th February 1911.

Mr. President, Ladies and Gentlemen,—

IT is fitting I should preface my remarks this evening with an expression of my thanks to the Royal Institute, and particularly to my fellow-members of Council, for the honour done me in appointing me to this position.

I am fully conscious of the responsibility attached to it, as well as of its surpassing interest, for a detailed consideration of the students' work of the past year brings the investigator into close touch with the architectural expression of the students of the day; and affords him an exceptional opportunity of judging its artistic value.

As in past days I have myself been a competing student, and retain a vivid recollection of the hopes and fears incident to that period of development and effort, I hope you will believe me when I say that my desire to-night in criticising these drawings is to combine justice with sympathy; and if I have to point out what appear to me to be mistakes it is with the sole purpose of helping the competitor in his future work.

On the whole, the number of students who have entered for the competitions this year is well up to the average. For the Essay Prize 12 competed; for the Soane Medallion 13; for the Tite Prize 11; for the Pugin Studentship 9; for the Measured Drawings Prize 5. On the other hand, the Owen Jones Studentship, the Arthur Cates Prize, and the Grissell Gold Medal have, strange to say, not attracted many competitors.

Time has not permitted me to read the essays which were submitted; but I am indebted to Mr. Reginald Blomfield, who took part this year in judging them, for some valuable remarks concerning them. I will read these remarks to you, as I am sure they will influence our younger writers on architectural subjects to cultivate a clear, simple, and direct style of writing. He says:—

"The essays sent in for the Institute Silver Medal were unequal. Some of them were irrelevant to the subject, but that sent in by 'Redundancy,' to which the prize is awarded, is an exhaustive and thoughtful essay on a difficult subject, and has well earned the prize.

"Certain serious literary faults appear in the majority of these essays, such as a tendency to rhetoric, which fails of its purpose; a habit of powdering the essay with quotations from every possible writer, poets, essayists, and others, many of them having little or no bearing on the points under consideration; flippancy and familiarity in style, occasional lapses of grammar, and, lastly, a mistaken conception of what either an essay or a book should be.

"Many of these essays are mere strings of classification; the subject is divided and subdivided till it runs out like a river, lost among the sands. No central idea emerges as a result of all the industry, and the writer appears to forget that an essay or a book should be an organic composition, with a beginning, middle, and end, and a backbone of some definite idea running through the whole.

"The object of these essays is not a display of literary fireworks, but the clear and logical presentation of the ideas and conclusions that result from the careful study of facts. The art of the writer should not obtrude itself; it is shown in the orderly marshalling of his forces, in the lucidity and precision of his statement, and in a certain suppressed emotion that gives the deeper harmonies of his music. A method of writing which shocks and jars is wrong. It is with writers as with artists, the best are those who make least parade of their technique."

I would recommend this excellent criticism to the consideration of all architectural students. I am persuaded that much of the ignorance of the laws of composition shown in some of these essays may be traced to the inadequate literary training which obtains in our secondary schools. I believe that the time must come when the many-sided character of an architect's education will necessitate a better understanding and co-operation between our architectural schools and the secondary schools of this country. In the meantime I would like this admirable criticism of the essays to be in the hands, not only of our students, but also of every schoolmaster in the land. Some of the mottoes displayed on the drawings bear out my contention. A motto should be in good taste, and at least grammatical. "Φερωκουκρετε" in Greek characters is senseless, and what can possibly be said of "Ego fecit" and "Fer dans blanc-mange"?

In turning to the exhibition of drawings, we find it consists, as usual, of two parts: (1) That which comprises exercises in design; and (2) studies in ancient architecture.

In forming some judgment of these two divisions, a careful observer will discover, I think, a certain weakness in the design section, and a certain strength in the other. The fact

that this year the Soane Medallion has not been awarded supports this view. The strength in the design section lies in the excellent work submitted by the winner of the Tite Prize. The way in which he has solved the problem presented for solution and the quality of his drawings should be particularly noticed. He has best fulfilled the purpose of this competition, which is to produce a fine design finely drawn. Later on I shall speak of his work in greater detail, but I wish first to criticise some of the work submitted in the competition for the Soane Medallion.

THE SOANE MEDALLION.

The Medallion is not awarded this year for the reason that no one of the designs shows a real grasp of the conditions governing the competition, or an entirely satisfactory solution of the problem. The Council have decided, in consequence, to bracket together the two designs under the mottoes "Circle City" and "Antæ" in Honourable Mention, and to divide the prize of £100 between the authors of them. With the decision of the Council I agree, for when an exhaustive study of the drawings has been made, it must be admitted that justice has been done in circumstances where the choice and decision were of considerable difficulty. The two successful designs represent two different views of the problem, and neither has wholly succeeded.

"Circle City" has apparently been over-influenced by the fact that the building is intended to stand in a park. The simple lines of his plan, with all the principal rooms on the ground floor, suggest too much an enlarged garden pavilion. This suggestion is fatal to the expression of dignity a civic building should possess. Moreover, it is questionable whether in actual building the conjunction of a rectangular and circular structure would look well. It is possible it would rob the completed building of balance and grace. Personally, I should also fear, in a circular building of this size, the creation of tiresome echoes. The arrangement also of the plan has prevented the provision of a suite of reception rooms in direct connection with the principal apartments. Although a large and handsome reception-room is shown on the first floor, it is too remote, and is only directly connected with a small gallery of the Guildhall. "Circle City's" chief strength lies first of all in the restraint which is shown in the design of his elevations—a restraint which is very welcome in these days of what is called "free classic"; and, secondly, in the way in which he has displayed his design; the drawings in pencil, with light washes of colour, are the best in the room.

The author of the set marked "Antæ" has treated the problem very differently. His plan is of the type of an *hôtel de ville*, which would be quite suitable to the centre of a large town; but, on the other hand, the elevations, notably the façade adorned with caryatides, which give an unusual touch of gaiety to the design, are very appropriate to the open position proposed. The weak spot in the scheme is that the central Guildhall is too small. It would not be possible to seat 1,200 people on the floor, the seats which are shown on the plan being far too near together from back to front. The small size of the hall has led to the entrance-hall being unnecessarily large; and it is doubtful whether the assembly-hall and reception-rooms on the first floors are of sufficient dignity or importance. By being only directly connected with the banqueting-hall and galleries of the Guildhall, they would be likely to be circumscribed in use. Generally speaking, the author is to be congratulated upon a design which is restrained, and dignified in character. The Greek *motif* adopted in the elevations has been carried out with discrimination. With the exception of the site plan, and some accessories in the perspective drawing, which would be better away, the draughtsmanship is decidedly good, especially in the case of the detail drawing.

"Vista" well deserves the Certificate of Honourable Mention which he has won. In my opinion his plan is the best in the competition. Had his elevations and sections displayed greater powers in design, this set would have surely earned for its author a more prominent

position. The chief excellence of the design lies in the plans; the grouping of the reception-rooms at the head of the principal staircase, between the banqueting-hall and the small hall, on the first floor, is particularly happy. Again, the Guildhall itself is admirably placed and excellently designed for its purpose. The author has evidently paid special attention to the many details in accommodation necessary for a building of this important character. He is especially successful in providing ample platform accommodation both in the large and small halls. This important matter has been generally rather overlooked in the other plans in the room, the grand organ and orchestra having frequently been obliged to be content with very inadequate space and accommodation. It is unfortunate that the drawings in this set are rather too black and too coarsely executed. Probably the author desired to make his work "tell," and used this method accordingly. I venture to consider that view to be a mistaken one. Drawings which are delicately and beautifully drawn are more attractive and more helpful in portraying a design.

"Sailing Ship" has a symmetrical, and, in many respects, a very well arranged plan, especially that of the first floor, where the banqueting and small halls are well placed with excellent separate entrances. The Guildhall suffers through not being better connected with the principal entrance. A feature of the scheme is its elliptical front and fine central tower. The latter would be a great success in actual building, but the curved front would not, in my opinion, be so successful. It is regrettable that the drawings, generally so good, should show signs of hurried workmanship.

"Fraternity" has a grandiose scheme on lines which, in the finished result, seem to be rather too large. This defect has led to a serious separation of the reception-rooms from the large halls of the building, and there is a certain monotony in the square form of the three principal rooms. The elevations are well drawn, but in design betray in some places a not very well applied eclecticism. For instance, in some parts *motifs* from places so far asunder as Greece, Rome, and modern France find themselves in juxtaposition with not very harmonious results.

"Dragon." The author of this design is to be congratulated on the bold attempt he has made to produce a monumental building, based upon Greek detail of the Ionic period. The Guildhall is placed in the centre of the block plan like a cella in a Greek temple, but the lines of the plan are too constrained within the temple-like area to permit the construction of spacious entrance-halls or well-lit corridors. The drawings, imaginative though they are, suffer from their peculiar technique; they are over-coloured and over-shadowed.

"ΟΥ ΤΟΠΟΣ." The plan is too small for the purpose, and the disposition of the rooms and the arrangement of the corridors show a need of further study in the special requirements of a plan of this kind. The elevations show a tendency to strive after a picturesque effect, which none but those who are quite sure of their ground should attempt.

"Experientia docet" is rather overweighted by the severity of the architecture in which he has chosen to express himself. Though he has a good symmetrical plan, it is too crowded with columns.

"Sign of the Black Fish," "Vitæ," and "Guild" have adopted an octagon form upon which to base their designs. This has led to trouble in the attempt to satisfactorily reconcile the claims of the many parts a Guildhall must possess.

THE TITE PRIZE.

Turning to the drawings submitted for the Tite Prize, mention has been already made of the excellent work provided by the winner, Mr. Louis de Soissons. The plan is admirable for the purpose—namely, the central courtyard of a Royal Exchange. It is thoroughly well thought out, stately, with ample and dignified entrances. The courtyard itself is as large

as possible, a first consideration in a Royal Exchange. The proportions of the building are exceedingly good, especially in the well-designed "order" of the interior. The drawings are beautifully executed, and gain technically by the careful showing of the jointing. Their good effect is rather marred by some signs of hurry in the detail drawings.

The design marked "The Circle" well deserves its Certificate of Honourable Mention. It is a well-drawn set, though rather over-tinted in too sombre and dark a grey; but the plan is beautifully drawn, and so also is the sheet of $\frac{1}{4}$-full-size details. The whole design is a thoroughly interesting study, and by its close following of Italian detail keeps strictly within the expressed intention of the competition.

"Gregalah" has adopted the rectangular form in his plan, but its general dispositions have caused him to produce too small a courtyard. If the plan thereby fails a little in dignity, the section shows an architectural scheme which would certainly be very effective. The proportions are good (except at the end of the building), and the design contains interesting suggestions for the use of colour in the decoration of the walls and ceilings. The drawings are generally good, but some strong black back lining in the $\frac{1}{2}$-inch-scale detail is to be deprecated.

"Dum Spiro Spero" has submitted an admirably executed set of pencil drawings, delicately washed in colour. The courtyard, which is generally finely designed, has sides of insufficient height, the small attic above the main order having a curiously stunted effect. Though the side entrances are too narrow, the plan generally is good, and the telephone-rooms are excellently placed.

The design under the motto "Centres" shows a spacious circular court, but a want of complete harmony between the upper and lower orders in the elevation would detract from its dignity and interest. The columns in the upper order, which are placed in couples, one behind the other, would have an unpleasant effect in perspective. The draughtsmanship is too coarse, and the drawings are too strongly coloured.

"Black Cat" has a workmanlike set of drawings, but, like others of these designs, the detail sheets are a little weak. Although he has a good rectangular form for his plan, too much space is given up to the shops and not enough to form spacious entrances.

"Hampton Palliolaers" has approached this competition in a wrong spirit. To graft a weak solution of Sir Christopher Wren's work at Hampton Court (as in the upper order of his building) upon a Renaissance Doric order on the ground floor is not a serious attempt at design, in the spirit of this competition, and must fail to produce a work of artistic merit and architectural character. Though the drawings generally are weak, they show signs that the author should be able to do better work than this, and some day I hope to see it.

The half-inch and $\frac{1}{4}$-full-size drawings in "Φερο-κονκρετε's" design is very good pencil work, but the design shows a lack of study in the all-important subject of proportion, and the arrangement of the roof would have a singularly crude and unfortunate effect.

The designs by "Ikki" and "Ego Fecit" show that their authors need study in the art of drawing, and of composition in the art of design.

"Ambitus" submits some well-drawn detail sheets in pure line, but his figure-drawing is weak, and the design has failed in its roof. To use the coffers of the roof for lighting purposes would have a very bad effect in actual work.

On leaving the consideration of these drawings for the Soane Medallion and the Tite Prize, permit me to congratulate the Royal Institute upon its recent decision to make a competition in design one of the compulsory features in its Final Examination. This competition will oblige the student in the future to study design systematically.

Every architect who has seen the good work done by young students in French ateliers in the *petits concours*, or sketch design competitions so frequently held there, will surely

hope such trials of strength may be more frequent among our own students. Even in the case of the youngest it is no bad thing to encourage him sometimes to "hitch his wagon to a star," or "dip his pencil in the hues of the rainbow."

THE GRISSELL GOLD MEDAL.

In the competition for the Grissell Gold Medal four competitors have entered. To "MCMXII." the prize has been awarded. Undoubtedly this design best fulfils the requirements of this competition. The construction is extremely well adapted to a temporary building, and the plan is quite good, though, personally, I should prefer a more dignified architectural treatment for the housing of an art exhibition.

"Fer dans Blanc-mange," by his choice of material—viz. ferro-concrete—has put himself out of court, as it can hardly be called one which is suitable for a temporary building. The plan is not very good, the galleries are too narrow, and the exterior of the building is lacking in dignity.

"Fleur de Lys." This design has the requisite temporary character, although the exterior brick walling is not so satisfactory as the construction shown in the winning design. The plan is better than the elevations, the latter being weak in architectural qualities. As a whole, the design is conceived on too modest a scale.

"P. O. M." Though the author has worked out his steelwork details with considerable thoroughness, he has failed to produce an architectural scheme.

THE MEASURED DRAWINGS SILVER MEDAL.

Turning to the second part of the exhibition, I shall speak first of the Measured Drawings Prize and Silver Medal. This is a very good competition. Five sets of drawings are submitted. After a careful study of them and a scrutiny of the measured work and sketches done on the spot, one feels that Mr. Maxwell has well earned the prize. His portfolio of measured studies is an admirable example of what such a collection should be. Taken together with his finished drawings, it shows that his study of this beautiful old house, Compton Winyates, has been thorough and exhaustive. In making his survey sympathetic and complete, he has realised more than any of the other competitors the special purpose of this prize—viz. to encourage a comprehensive and highly intelligent study of an ancient building of importance. The result is that he has produced a set of drawings in a manner worthy of the interesting example of English architecture he chose to study. I should, however, draw attention to the fact that the finished drawings consist of mounted tracings from drawings made on the spot.* I think such a practice is to be strongly deprecated, for the reason that tracing-paper, however well mounted, is a fragile material of little natural permanence. Measured drawings of this importance may pass into our national collections, such as that at South Kensington, and should be on sound English drawing paper.

The two competitors who have received Honourable Mention have both submitted sets of drawings of great merit. The technical excellence of their work is very good. "Arno" has particularly distinguished himself in his detail-drawing and in a perspective sketch. It would have been possible to commend these two sets more highly had the original surveys made on the spot in both cases shown better evidence of a closer investigation of the essential qualities of the buildings. The author of the drawings of the Palazzo Chiericati, Vicenza, has made, as has also "Sphinx," good efforts to obtain a place in the competition. Neither artist has yet attained that mastery of pencil and pen which counts for much in the winning

* I am glad to say Mr. Maxwell informs me that the paper is not tracing-paper, but a transparent tough paper of a permanent character called "English Bank." I am inclined, however, to favour the old-fashioned English hand-made drawing-paper as being the best for important drawings of this character.—G. C. H.

of this prize. We look for fine drawing, the line delicate and beautiful, firm and vigorous, expressive of the architectural qualities of the building. "Sphinx's" detail-drawing is well done, but he is unfortunate in his building, which, though admirable in its design as far as it goes, is limited in architectural interest.

THE PUGIN STUDENTSHIP.

The drawings submitted for this prize show a very high degree of merit. Mr. James Macgregor has won the first place by the excellent quality of his workmanship and full set of drawings. His perspective diagram of the interior of Sherborne Abbey is to be especially commended. Mr. Norman Mackellar shows an excellent study of Durham Cathedral; a model study for a Pugin Student, and a proper subject for competition for the Measured Drawings Prize.

Mr. W. J. P. Jones submits some excellent drawings, particularly of Stokesay Castle and some foreign subjects. In the choice of the latter he has strayed from the strict conditions of the competition. Mr. Anderson and Mr. Leathart have also been honourably mentioned; the former has good work from Lincoln and Southwell, and the latter very good representations of carved and coloured woodwork.

THE OWEN JONES STUDENTSHIP.

It is regrettable that a studentship of this importance and value should have attracted but two candidates. The competitors have spent too much time upon very elaborately worked figure painting and facsimile representation, although in doing this they show quite remarkable excellence. It should be remembered that the object of the competition is to test the competitor's acquaintance with the disposition of colour in such a way as to enhance architectural effect, and to beautify the building by colour and such ornament as may assist in this result. Correct drawing of the figure is important, but not so much the painter's skill in execution. The drawings of both competitors show much ability.

THE ARTHUR CATES PRIZE.

Mr. J. B. F. Cowper has deservedly succeeded in winning this excellent prize with a fine collection of sketches and measured drawings, chiefly of mediæval work. The competition generally is weak in its representation of studies in Classical and Renaissance architecture. One may hope that in the future the competitors for this prize will pay more attention to these periods. This is essentially a competition which should contain some of the best studies by our younger men; studies which, like those submitted for the Measured Drawings Prize, should furnish evidence of a sound scholarship, both intelligent and thorough.

VOTE OF THANKS.

Sir HENRY MIERS, D.Sc., F.R.S., Principal of London University, rising at the instance of the Hon. Secretary to propose a vote of thanks to the President and Mr. Horsley, said: Let me, in a very few words, fulfil the pleasant duty which has been imposed upon me. I say "a few words," because I am sure that to those who are accustomed to build in stone, and to lay the foundations of works which shall stand the test of ages and be admired by coming generations, the more evanescent words of speech are not things which commend themselves to them in the same way as the more solid monuments which it is their duty to build for posterity. But still, speech may sometimes have as permanent effect as a building, provided there underlies it what makes buildings impressive—namely, an idea. And though I have, in the course of my own career, lived among buildings which have sunk deep into one's mind and make one feel that Eton, Oxford, and Cambridge buildings have a potent and permanent effect upon those who live amongst them, I have heard there words which have had as lasting an effect, because inspired by an idea, which will live as long in the

memories of those who heard them as the buildings familiar to them and to their forefathers. I think the President has shown himself this evening—as I knew him to be before—an artist in words as well as in stone, and he may perhaps claim for his words, as for his other performances, *exegi monumentum ære perennius*; because, after all, what he has said to-night will, I take it, sink into the hearts of those who heard it, and will have as lasting an effect upon them as anything they can see, even in the admirable designs upon these walls. I am glad he has called attention in his Address to the need of education, an all-round general education, for architects; and I am glad for that reason that I have been asked to propose this vote of thanks to him for his Address, because we, in the University, take architecture very much to heart, and we hope that we are laying the foundations for a really strong school of architecture in London, inspired by University traditions, to be carried on in University ideals. And we hope to have, in maintaining a School of Architecture, the advice and assistance of this Institute. We look forward to your co-operation, and we hope that you will be able to help us to build up a really fine School of Architecture. It is my pleasurable duty, also, to associate with this vote of thanks to the President for his Address a vote of thanks to Mr. Horsley for the sympathetic, searching, and excellent criticisms which we have heard him deliver about the designs that hang upon these walls. As may have been seen from the newspapers lately—for I must refer to these matters affecting the University—we are looking forward to having, before any long-distant date, a dignified home for the University of London, which will bear comparison with the grand University buildings which grace other cities; and I hope there may be in this room some architects worthy of carrying out that idea of erecting in the centre of London a really fine, magnificent, and lasting home for the University of London. I take it that the designs upon these walls represent the efforts of rising architects who are to make themselves known to future generations; and I assume that the criticisms which Mr. Horsley has expressed will be extraordinarily helpful to them in their careers. The President has told us a story about "Eyes" and "No Eyes." In proposing this vote of thanks, I hope we shall be able to say "The Ayes have it," or, to misquote the same unknown author who has already been quoted this evening, *ego habet*.

Sir ALFRED KEOGH, Rector of the Imperial College of Science and Technology, seconding the vote of thanks, said: I feel that I can hardly add anything of use to the very eloquent words which have fallen from Sir Henry Miers. As the Head of a great Institution in London, having a very much wider scope than that over which I preside, it is natural he should allude to the efforts which are now being made to found a great Architectural School in London. It is also natural, I suppose, since you have chosen him and me to propose and second this vote of thanks, that I, too, should say something on the educational side. But let me remark that, although we in the Imperial College are in a very much narrower line, we have a touch, as I think all scientific schools have a touch, with architecture, which has been, if I may be permitted to say so in this room, somewhat neglected in the past. Of course, it is correct and right, and one rejoices to hear the President tell you, that demands will be made in the future for the raising of the general education of architectural students. And that, of course, is true; the necessity of it is recognised in all professions. But I know that a good number of the members of this Institute have recently considered the desirability of giving architects a sounder scientific education than they get at the present time. We know efforts have been made by this Institute to bring home to architects the necessity for an acquaintance with scientific work. It is desirable that architectural students should have a more intimate acquaintance with the materials which they use than they have the opportunity of possessing at present; and accordingly efforts have been made by us at the Imperial College to provide something in that direction, inadequate no doubt, but we hope in time that our efforts will meet with your approbation, and that we shall in time take some part in providing for the efficiency of your profession. Of course, it is natural that I should bring these things forward on an occasion of this description, and I hope that one of the reasons I was asked to second this vote of thanks to your President was that I might mention this to you. But, as I have already remarked, it is impossible for me to add anything to what Sir Henry Miers has said. The evening has been to us, though we have no connection with your profession, one of intense interest. Certainly, I listened with the greatest pleasure myself not only to the charming and honest statement of your President, but also to the admirable criticisms—for no doubt from the technical point of view they were admirable—and the charmingly delivered address which was given to us by Mr. Horsley as his report upon these drawings, and particularly upon the essays which have been sent in. I very warmly commend this vote of thanks to you, ladies and gentlemen, and I am sure, as Sir Henry Miers has said, it will receive your approbation.

The Hon. Secretary having put the vote to the meeting, it was carried by acclamation, and briefly responded to by the President, who said that he hoped what he had said in his Address would be treated by students without prejudice, and that it would not be brought up against him on some future occasion!

ARCHITECTURAL EDUCATION: A PLEA FOR BREADTH AND SANITY.

By H. P. G. Maule [*F.*], Head-Master of the Architectural Association School of Architecture.

Read before the Manchester Society of Architects, 24th January 1912.

I MUST confess to a feeling of great diffidence in addressing you on the subject of Architectural Education. In the first place, the subject is full of difficulty, for there is little or no settled conviction in England as to the lines we should follow and, in the second place, you have your own University, with its Architectural School under the distinguished guidance of Professor Capper. You have, therefore, thought out your own scheme, and doubtless possess strong views as to the methods and principles to be followed in the education of the young architect of to-day, with perhaps special regard to Lancashire in particular. I will only ask you to believe that in writing this paper I have endeavoured to embody the convictions which have gradually forced themselves upon me during the past nine or ten years, years which have been largely occupied, not only with architectural education in its broader aspects, but with the actual and practical problems attached to controlling and teaching a great number of students in the Architectural Association School, superimposed upon the cares and difficulties of a somewhat general and scattered practice. Without, I hope, appearing egotistic, I think I may claim that the interaction of these three influences should prepare an atmosphere of common-sense and reality, should engender a real desire to see established a system or principle of architectural education which will lift the general plane of our architectural achievement to a far higher level, and, at the same time, produce men who will be fitted to carry on their great vocation with the equally necessary mental and moral equipment of common-sense and integrity, worthy of a great business nation.

I desire, therefore, to take my stand on the broader basis of the general architectural education of the English architect, not with reference to any particular city, university, or school, not to the superperfect equipment of the giant few, but for the solid, sound, sane, and sober training of the many.

I assume that, as in all educations, the first step is to establish a basis of general training, for we must ensure that all who in the future profess and call themselves architects should have had at least a definite and comprehensive training in the broader aspects of architectural history, of materials, construction, and design; to say nothing of the business aspects of practice.

Even in a small country such as ours, conditions vary greatly, and, while too much district specialisation is to be regretted, it would be both unwise and impolitic to lay down hard and rigid rules, or a universal system; yet at the same time we must not forget that general training must precede specialisation, and that the bare outline enumerated above is the minimum, and that there remains vastly more than this if we are to rise to the vast conceptions and great ideals that a modern civilisation must require from us.

It is a truism to say that the more we advance in civilisation the more complex does that civilisation become, and, as a corollary, the more does everything tend towards specialisation, and the longer in time must be our apprenticeship.

Now the fundamental principle of modern specialisation is that it must be based upon a broad and solid foundation of the general and particular knowledge out of which the specialised form has developed. The highly trained medical specialist has first of all to complete his general medical and surgical education. In the Navy, the newer system is to train in general before differentiating between executive officer and engineer. In effect it may be said that specialisation proceeds out of the general, and that all specialised branches require an extended period of time in training for their acquisition.

It is an educational truism that to specialise too soon is the curse of secondary education.

Hence follows the need to distinguish clearly between what is general and what is special, and to realise that all who desire to equip themselves fully as modern architects must be prepared to devote a longer initial period to that end.

THE PSYCHOLOGY OF EDUCATION, OR MIND TRAINING.

In England, until comparatively speaking a very few years ago, the training of the architect was accomplished almost entirely by apprenticeship or pupilage; and, so long as life is comparatively simple, this system has many advantages. But, with the growing complexity of all forms of modern development, the difficulty of acquiring a general training in any one profession has enormously increased, and the educational conscience has at last awakened, and is now actively engaged in standardising and perfecting all forms of professional and æsthetic training.

Unfortunately, for various reasons, there has not

always been sufficient regard paid to what is now termed the Psychology of Education, by which I mean the induction, by training, of certain habits and qualities, apart from the particular objective; in our case, the study of architecture.

To illustrate my meaning I would like to quote that famous passage in Huxley's Essay on "A Liberal Education," written so long ago as 1868, and yet still, I fear, far from realisation, in most of our so-called educational establishments :—

> That man I think has had a liberal education who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that as a mechanism it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength, and in smooth working order—ready, like a steam engine, to be turned to any kind of work and spin the gossamers as well as forge the anchors of the mind; whose mind is stored with the knowledge of the great and fundamental truths of nature, and of the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; one who has learnt to love all beauty, whether of nature or of art, to hate all vileness, and to respect others as himself.
>
> Such an one and no other, I conceive, has had a liberal education; for he is, as completely as a man can be, in harmony with nature. He will make the best of her, as she of him. They will get on together rarely; she as his ever-beneficent mother; he as her mouthpiece, her conscious self, her minister and interpreter.

This passage, as striking for its comprehensive thought as for the beauty of its English, applies with equal force to training that is no longer secondary; indeed, I am not sure that its observance is not of greater importance now, from the fact that the public and secondary schools fail as a rule to produce men "in harmony with nature," but rather men whose knowledge is largely the surface knowledge of books and facts, and not the knowledge derived from observation, deduction, and trained natural resource.

Now, when you remove the student from the practical training of apprenticeship, and bring him up under the forced draught of the school, you may achieve the result of giving him general and special knowledge, in an artificial and tabloid form, at the expense of that training of mind, in initiative and self-reliance, in observation and deduction, which is in reality more than half the battle in life.

The training, therefore, is ultimately doomed to failure, unless you inculcate a system of natural development in initiative and self-reliance, whereby the artificial atmosphere of the school is brought into relation with realities, and therefore brings the student into harmony with those facts of actual existence which he will be ultimately called upon to meet.

In the medical profession, for instance, the young student, after passing through the college attached to his hospital, and joining the hospital itself, actually comes in contact with life in its crudest forms, and thus his training is saved from the reproach of being too theoretical or divorced from the problems he will afterwards encounter in life.

One sometimes finds wisdom in unexpected places, and it may surprise some of my audience to hear that, in my opinion at least, the training of the army soldier is at the present moment on the soundest educational basis, and that this principle of educational psychology is recognised at its full value.

In *Infantry Training*, part 5, "Training in Field Operations," it is laid down in the general instructions that :—

> In order to develop and encourage initiative, a commander must leave to his subordinates in peace training the solution of the problems which they will have to decide for themselves in war. . . . Mistakes or errors in judgment in the field should be noted by the director or commander, but, as a rule, the operation should be allowed to take its course without interruption. At the end of the operation any mistakes made should be pointed out and fully discussed. By this means errors may be eliminated *without checking self-reliance*, and at the same time initiative and capacity for correct decision will be developed. Censure and fault-finding must be avoided, and allowances must be made for legitimate differences of opinion based on reasonable arguments. It is particularly necessary to deal gently with *misplaced initiative*, and it should be sufficient to explain how it would have led to bad results.

I may observe that insistence is enforced on this aspect of training in every part of a modern British soldier's education.

If for "Training in Field Operations" you substitute the words "Training in Design Studies," I could not more accurately express my own views with regard to the general principle upon which I conceive the training in design should be developed: bearing always in mind that simultaneously a correct judgment and taste is being formed by which means alone can a real love of all beauty "whether of nature or of art" be developed.

One might mention here that, broadly speaking, the evolution of design "teaching" at the Ecole des Beaux-Arts in Paris has been to foster and encourage these very self-same qualities of initiative and self-reliance. I refer of course to the practice of working "en loge."

Now, it is a striking fact that there is at last a general feeling among educationalists that all is not well with our educational system; that it fails, and fails badly, in producing those qualities upon which Huxley was so insistent nearly half a century ago. A decade of teaching and of practical work with students of all grades and temperaments has convinced me that very often education, as we practise it, more often than not, sterilises instead of stimulates; and that any system which is formulated without due observance of the effect of teaching upon the taught is bound to fail in its objective. The English student is not an automaton, thirsting for knowledge, who can be regarded as a pawn in the game, but an individual, strangely susceptible to realities, easily discouraged and disheartened, unless his interest is

kept and his enthusiasm awakened. He is, moreover, badly equipped by his public school training for an intellectual appreciation of the scholarship and science of architectural training. He is not, as a rule, a quick or facile designer by nature, and if you attempt too much and overcrowd the curriculum, you may "teach" him, but you do not promote education.

Now, if we architects are really going to take the matter of our own education in hand, we must recognise this great question of psychology in teaching; we must *not* overburden the natural mind of youth with more than it can possibly (in all but exceptional cases) absorb; and we must be content to run the risk rather of doing too little than of confusing by attempting too much.

Unfortunately the authorities in architectural training have been in the past more concerned with the duties of a practising architect than with education as a science, a science the most intricate and many-sided of all sciences, in that its raw material is the tender and unformed mind of youth.

Moreover, these authorities, by their individual capacities and attainments, have proved themselves to the world to be men far above the general average, and therefore, perhaps for this very reason, inclined to legislate for others as for themselves.

From these causes there has been far too little attention paid to the psychology of architectural education; in fact, I sometimes doubt if some of the "authorities" realise that such a science exists. Yet there will continue to be mistrust of school and university teaching, among the vast body of practising and practical men, until we can show them that the school training is *not* devoid of those formative characteristics which promote the habits of observation and self-reliance, so inseparable from achievement in the matter-of-fact and work-a-day world of practice.

In addition to the neglect to appreciate this aspect of architectural education, there has been a tendency to confuse the issue of general and specialised education. In fact, the more highly specialised forms of architecture have been regarded as the goal of all, whereas a broad and general standard of achievement should be laid down as a basis of general education, and the specialised forms could then be built up upon that, as has been done in the case of medical education.

I refer more particularly to the very general, and yet I think erroneous, impression, that what is called monumental design should form part of the first four years' course.

Now, in all large bodies of students, such as it has been my fortune to control, there will be some who show, from the first, that they are specially distinguished, and that they possess, in marked degree, those qualities which make for great ultimate achievement.

The warp and woof of our educational system should be so fashioned in the loom of experience, that it will not confuse the mind of the average student, or hinder the progress of the more brilliant.

Is there any recognised training in the arts, sciences, or professions, in which the highest ultimate problems are given generally at an elementary stage? I think there can be only one answer to this; and that we would be wise to make the advanced study of monumental design dependent upon proved individual capacity, or treat it as a specialised form of advanced education, only to be attempted after a very thorough general course has been completed, and this only when the student's initial sketch study for the design can be fairly the result of his own imagination and knowledge. It does not follow, as is sometimes assumed, that because monumental problems are relegated to an advanced period the qualities which underlie the production of great architecture would be neglected. On the contrary, in any training worthy the name, those qualities and principles would be insisted upon from the very commencement, and almost all design problems, no matter on how simple or small a scale, would be given with a view to the ultimate and larger conception of monumental architecture. Nor does it follow that what may be termed "advanced design" would be, or is, excluded, but the average English student has certainly a great deal of ground to cover before he is really ready to tackle monumental problems without monumental confusion.

It is the distinction between what is general and what is special, and the amount of time that should generally be allotted to each, that I should like to see more generally understood and more clearly defined.

It may be said that I am setting up bogies for the pleasure of attempting to knock them down; but if you will only take the trouble to turn to the Report of the Board of Architectural Education, published in the current number of the Institute Kalendar, and therefore I suppose still to be taken as the deliberate purpose of that distinguished body, you will see that, while there is much that is excellent in the general clauses, the amount of ground which it suggests should be covered in four years is simply abnormal.

Not only do I say that it is a physical impossibility in four years to cover one half of the subjects there set forth, but that the mere setting forth of such a list and such a time shows the most complete miscalculation of the capacity of the material we are called upon to educate in mass.

The difficulties of architectural education are further complicated by the present somewhat chaotic state of architectural politics and the fact that the newer forms of education had to be more or less grafted upon an examination system fashioned to meet an entirely different set of circumstances.

I do not wish to belittle the many and great

difficulties our governing body has had and still has to contend with, but I believe some of those difficulties could be lessened by the evolution of a clear and definite idea, as to the real objective of architectural training as a whole, and the real capacities of the average man we have to educate.

REGISTRATION.

It is, I think, generally admitted that some form of registration is necessary and will arrive, and therefore the next twenty years or so is bound to be a period of consolidation and building up, before any such fundamental change in policy and practice can have its full effect. It is the more imperative therefore that we hasten slowly, and make sure of our general principles, before launching out into ambitious and ill-digested schemes which may only lead to waste of money, and further confusion of training.

In the first place, I think we ought to realise that we have got to work out our own educational salvation, on lines suited to our particular needs, our climate and our national characteristics. A nation with a great architectural past, such as ours, broken though the thread may be, ought to have no difficulty in so shaping its own architectural future that our building once more becomes real, vital architecture, fashioned by that fertile Mother, ever-present necessity, remembering that in an advanced civilisation necessity predicates far more than mere commercial utility.

As our time is limited, it will be well now to epitomise the main principles I would like to see recognised more generally, as the basis of our architectural training :

First, the compulsory insistence upon a general architectural training of not less than four years, two at least of which should be passed in an architectural school.

The recognition that such training is to be only general, and that it should include a definite educational purpose, in the promotion of initiative and self-reliance, together with habits of observation and deduction.

The broad lines upon which this training should run would be as above indicated.

A knowledge of the broader aspects of architectural history, of materials, construction, and design, accompanied by that training in taste which will implant the power to see and appreciate all that is beautiful in art and nature.

The standard required might possibly rank with the present Institute Intermediate papers, including design, but not the present standard of "passing" those papers.

Secondly, the formation of the machinery for more advanced and specialised studies, the first grade of which would at present approximate towards the standard indicated by the Institute Final papers, but be considerably higher than the present average standard of "Pass."

By setting a really high standard of general education for the Intermediate, those students who, by stress of circumstance, were unable to continue with a definite course, would, by reason of their continued office experience, and the attention paid to the psychological aspect in the earlier years, be able to continue their own studies, and thus reach the Final standard, without undue expense or delay.

The remaining advanced courses might carry with them certain extra distinctions, and would at present be post-final, and in the nature of specialisation. For instance, such subjects as Advanced Civic Design, Town Planning, and perhaps Colour Decoration, could well be treated as specialised forms, though no doubt dealt with broadly in the earlier years.

In relation to the formation of these courses it is, I think, possible that a good deal could be done to co-ordinate them with some of the various prizes and studentships offered by the Institute and other educational bodies. These could then be made to serve as a fulcrum or incentive to the continuation of the advanced studies, and would probably be the means of attracting a far greater number of students than is annually the case at present, particularly if the attainment of a certain standard in each subject carried with it a definite distinction, irrespective of actually winning the prize outright.

Thirdly follows the wider recognition of the fact that greater time for study must be given by all who desire to do more than acquire a minimum standard.

As it is inevitable that sooner or later the scale of fees and charges will have to be reorganised and increased, it would perhaps be feasible to augment particularly those which relate to specialised forms of architectural practice, thus offering a further direct incentive to those men who are prepared to spend a longer time on definite education.

The main principles are therefore, *First*, the recognition by architects of a science of mind training, the peculiar province of the practical educationalist, to be attained by method and system. *Secondly*, the recognition of a broad distinction between general and special education ; for surely there is no greater fallacy than in specialising too soon, and in not recognising that while all may not attain the same ultimate heights, all must be given the basis from which those heights can be attacked.

Largeness of view, dignity of conception, of symmetry, balance, proportion, all great architectural principles, can be inculcated from the commencement ; but, whatever else you do, you must not confuse, for as Bacon said "Truth comes out of error sooner than out of confusion," and if, by attempting too much, you merely confuse, not only do you not educate, but you destroy that very vital attribute of mind, clearness, and breadth

of mental vision, which it is your peculiar privilege to build up and develop.

These, then, are main principles broadly sketched, for time does not permit of detail, but if they are true, as I believe, and if they were generally accepted, I cannot but think they would make for solidity in the future, and allow us to go forward confidently to more advanced training, such as would attract the abler men, and tend to prevent that immature blooming into obscure practice and competition work, which is too often the result of youthful talent denied the opportunity of that higher and more specialised training which would strengthen and develop genuine capacity into the production of really great work.

If time permits I would now like to consider a little more closely the principles (for we must still work on broad lines), which I venture to think should be the basis of the more general and elementary education which precedes the more advanced and specialised.

ARCHITECTURE AND THE FUNCTIONS OF AN ARCHITECT.

Obviously, the whole question of architectural education hinges upon our correct interpretation of the true functions of an architect, and the fact that the education of the future will have to be, first for the benefit of the average many, and not for the exclusive benefit of the privileged few, as has been so largely the case in the past.

Would it not also be well to realise more generally that national architecture should not consist merely in the production of the greater buildings of our civilisation, but in each and every kind of structure to which the term building can be given, from the humble dwellings of the proletariat, to the municipal palace or great Government office.

Architecture has a far deeper significance than the mere gratification of the eye and senses, or as an emblem of power and wealth. It is largely a nation's sign manual of character. The refinement and subtlety of the Greek, the driving power of the Roman, and the mysticism of the mediævalist, are they not fitly expressed in their buildings?

Is not the present unrest and dissatisfaction of our peoples equally portrayed by the ugliness and unrest of much of our building? Are not our governing and commercial characteristics more faithfully discovered in our great engineering works, ships, and engines? Is not this because we have divorced architecture from reality in all but plan, and set up false gods and fashions of styles and periods, whilst engineers and shipbuilders have clung faithfully to reality and purpose.

Do we not, one and all, desire to see that which is now debased and ugly shut out, and the nation at large, as well as our noble selves, rise to a consciousness of the inherent nobility and power for good, which a great architecture should bestow upon the material and spiritual welfare of the modern State?

If we turn to the past for guidance, a study of the history of architectural development forces us to the conclusion, beyond dispute, that architecture is primarily a structural art: lavish on it the genius of a Phidias, or the brush of a Raphael, it remains beneath a structural entity.

Materials and methods may vary, from the simple column and lintel unit of the Classic Greek, through the brick reinforced arch and vault of the Roman and Byzantine, and the mediæval conception in stone of these same structural units, down to the latest inventions of ferro-concrete; but all show one supreme fact: that great buildings have been in all ages great organisms, as great in conception and structure as in architectural expression, that architecture is in fact a structural art decorated, and not a decorated art constructed. There is no scene-painting here, but living, pulsating, compelling structure, the daring inventions of great minds, tempered by tradition and building experience, and fired by lofty ambition to beautify all that pertains to the Mistress Art, and her hardly lesser satellites, sculpture and painting.

Have we then so far changed in our modern conditions, that architecture has ceased to be a structural art, but has become a pitiful matter of scene-painting in stone, with the engineer as stage carpenter?

I do not believe it for one moment. Give the present-day architect the right training, teach him the essential qualities of his art, train his mind and faculties to gauge the nobility and beauty of his calling, and he too will rise in time to the same heights of daring and imagination as the greatest of former generations.

Even if we ultimately adopt, for all great building, some form of co-operation between architect and engineer, as is so largely the case in America, we should recognise that structural engineering is only a specialised form of building, and therefore the architect who desires to specialise in, shall we say, architectural scene painting, should nevertheless be given, first, such a general training in structure as will fit him to meet the engineer upon common ground.

In any event, let us deliberately decide whether we will adopt one course or the other, after we have had that general education which I have endeavoured to point out is so necessary a foundation for all specialised forms.

What then do we mean by essential qualities in this general training? Briefly they may be summarised as follows:

1. The scientific study of materials and contruction in their more elementary form, with special reference to locality and climate.
2. The analytical study of past building methods

and architectural expressions, to which we give the generic name of "History." The deduction from this study of broad principles in design; the deduction, that is, of such principles as, for instance, symmetry and balance, the ever-recurrent effort of all great building epochs.

3. The application of the above—that is, the producing of architectural design from our scientific knowledge of materials and construction, co-ordinated with the principles deduced from past and present forms.

This comprehensive co-ordination in teaching design and construction (which are really inseparable in all the arts) should be the foundation, from the beginning, of all elementary training.

It is really quite incomprehensible how we have drifted into separating design from construction, in our approach to architectural study.

If it be once conceded that architecture is still a structural art, the key to a sound architectural education lies, to my mind, in the skill with which we combine and co-ordinate all the component parts. There is no reason why the study of materials, construction, and design should not be one indivisible operation.

Once you achieve this; once you bring the student into harmony with the central fact of architectural development, and augment his faculties for rapid initiative and imagination, you are free to go on and build up advanced design upon that structure, without burdening him over-much with the more mechanical and engineering problems.

4. The whole course being livened and quickened, by being founded upon a system of mind training, by which the student is stimulated and not sterilised; together with the creation of a standard of taste—that is, a knowledge and appreciation of all that is beautiful in Art and Nature; for this study of the humanities of Art should form part and parcel of the student's training from the very first.

To put it more plainly, what I mean is, if we bring up our students upon a principle of selective, shirtfront architecture, be that shirtfront never so glossy and suited to its particular make of linen, we shall never induce a general principle of architectural education in design, applicable to all forms and expressions of our industrial and national life.

I do not want to be misunderstood. It is more than probable that the world has passed that stage of human activity when any one form of architectural expression can be evolved, adapted to our many and varied activities in building: Domestic, Commercial, Municipal, and Imperial. Some form of deliberate eclecticism is almost certainly inevitable, but if we deliberately decide that Neo-Greek, or Neo-Turk, is the one form most suitable for monumental building, we can in our education specialise in that to our heart's content later on, but it should *not* form part of the elementary training, which I am sure, from a varied experience, cannot be thoroughly mastered by the average student in a shorter period than four years.

If this is a somewhat vague and shadowy summary, it is because I have already taxed your time and patience to the uttermost, and it would take, not one paper, but several, to deal adequately with each of the subjects thus briefly set forth.

May I say that, while I have attempted to treat only with broad principles, to promote discussion, it is not because I have no desire to come to closer grips with matters of detail? Possibly no subject is to me personally of greater interest than that of architectural education. It is because I feel that we are more likely to go astray on broad principles than in matters of detail, that I have attempted to put my own views before you in this form to-night.

I am painfully aware that much you might expect has been left unsaid; for instance, I have not touched upon the great question of architectural delineation, but I have done so purposely, because it is self-evident that the student must be taught to draw, though opinions may differ as to the length we should go, and the methods we should adopt.

In conclusion, gentlemen, I trust that in placing these views before you I have not appeared too dogmatic, and that the discussion which will follow may mark a further step in the progress of that which we all have at heart, the real appreciation of the many and great difficulties which lie before us, in placing the education of the younger generation upon such a basis that they may learn "to spin the gossamers as well as forge the anchors of the mind," in all that pertains to the Mistress Art.

ARCHITECTURAL COPYRIGHT.

The following Report of the Royal Institute Committee on Copyright was presented to the Council at their Meeting on Monday the 5th February, and unanimously adopted :—

REPORT OF THE ROYAL INSTITUTE COMMITTEE ON COPYRIGHT.

MEMBERS.

John W. Simpson, Vice-President R.I.B.A., *Chairman.*

John Belcher, R.A. [*F.*].
E. Guy Dawber, Vice-President R.I.B.A.
Edwin T. Hall [*F.*].
Henry T. Hare, Hon. Sec. R.I.B.A.
Edwin L. Lutyens [*F.*].
Herbert Shepherd [*A.*].
C. H. B. Quennell [*F.*].
John Slater [*F.*].
H. H. Statham [*F.*].
Leonard Stokes, President R.I.B.A.
Percy B. Tubbs [*F.*].
Wm. Woodward [*F.*].

Ian MacAlister, Sec. R.I.B.A.

To the President and Council, Royal Institute of British Architects—

Gentlemen,—

Copyright Act.

Your Committee beg to report that in accordance with the recommendation in Clause 6 of their interim Report of February 1911* adopted by you, they have carefully watched the Bill in its various stages through both Houses of Parliament; and they have now the satisfaction of informing you that it has received the Royal Assent and will come into operation on 1st July next.

The Act has amended and simplified in a very satisfactory way the principal clauses relating to Architecture in the draft Bill. The amendment to Section 2† proposed by the Royal Institute‡ is adopted, and the word "plan" which is inserted appears, with the context "sketch" and "study," to render the architect's position safe with regard to both preliminary and working drawings.

The amendment proposed to the definition of "Architectural work of Art" in Section 35§ was adopted by adding the word "model," the Attorney-General stating that in his opinion the words "drawing plan" were unnecessary as being covered by the definition of "artistic work" and the amended Clause 2 already referred to.

The vexatious and impracticable dual ownership of Copyright by the employer and the architect, which was proposed by the draft Bill, has been abolished; and the copyright in architectural work belongs to its designer, as desired by the Royal Institute.‖ The suggestion (arising out of the dual ownership) as to an amendment of the R.I.B.A. Schedule of Charges, which appears in Clause 4 of our Interim Report above referred to, may now not be necessary.

The photographing and drawing of buildings is (partially) protected by the addition of the words "which are not in the nature of architectural drawings or plans," this also being an amendment proposed by the Royal Institute. On the other hand, our very moderately worded

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* Journal, 6th May 1911, p. 458.
† Sec. 1 of draft Bill.
‡ Journal, 6th May 1911, p. 460.
§ Sec. 36 of draft Bill.
‖ Journal, 6th May 1911, p. 461

amendment to Section 9,* by which discretion with regard to certain penalties was left to the Courts of Justice, was refused.

Registration, as *primâ facie* proof of Copyright, which was optional in the draft Bill,† is not required at all by the Act; and the amendment proposed by other representative bodies and supported by the Royal Institute of British Architects‡ became unnecessary.

We subjoin *in extenso* for your reference the text of the Clauses of the Act directly affecting architects, together with an extract from His Majesty's speech referring to the general aspect of the measure.

The effect of the Act may be broadly stated as follows :—

a. Architecture is formally recognised, under the definition of "artistic work," as entitled to the same protection as painting and sculpture.

b. The right to repeat or reproduce his work belongs to an architect as from the moment of its first production, whether in the form of a drawing, model, or building.

c. Although the copyright may have been sold by an architect, he remains free to use the sketches, plans, models or studies made by him for the purpose of the work, provided he does not repeat the main design.§

d. Measured drawings of his building may not be made or published without his permission.

e. Copyright subsists for the life of the author and fifty years after his death—(Clause 16 deals fully with cases of joint-authorship).

f. In the case of work done by an architect in the course of his employment under a contract of service (*e.g.* the official architect of a Corporation) the copyright belongs to his employer.

g. An architect whose copyright has been infringed is entitled to claim damages, but cannot obtain an injunction to restrain the erection, or an order for the demolition, of a building which has been already commenced.

Your Committee respectfully recommend—

1. That advantage be taken of the first opportunity offered for revision of the Act, to press, (*a*) for the amendment of Clause 9, on the lines indicated in the letter of the Royal Institute of British Architects to the Board of Trade of 16th November 1910; and (*b*) for further protection as regards the publication and sale of photographs of copyright work. It would be reasonable to require the approval or permission of the author in such a matter.
2. That the thanks of the Council be conveyed to Lord Plymouth and to Lord Redesdale (Hon. Fellows R.I.B.A.) for their support and defence of the interests of the profession during the debates on the Bill in the House of Lords.
3. That your Committee, having now fulfilled the terms of their reference, be discharged.

On behalf of the Committee on Copyright,

JOHN W. SIMPSON, *Chairman*.

* Sec. 7 of draft Bill.
† Sec. 17 of draft Bill.
‡ JOURNAL, 6th May 1911, p. 462.
§ See also Mr. Macgillivray's opinion, JOURNAL, 6th May 1911, p. 459.

EXTRACT FROM THE KING'S SPEECH OF 17TH DEC. 1911 PROROGUING PARLIAMENT.

An Act has been passed consolidating and amending the law relating to Copyright. This measure will enable Me to accede to the International Convention recently signed at Berlin; and when supplemented by corresponding legislation in My self-governing Dominions will, I trust, provide a comprehensive and equitable code of law regulating this important subject throughout My Empire.

CHAPTER 46.

An Act to amend and consolidate the Law relating to Copyright. A.D. 1911

[16th December 1911.]

BE it enacted by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

PART I.

IMPERIAL COPYRIGHT.

Rights.

Copyright.

1.—(1) Subject to the provisions of this Act, copyright shall subsist throughout the parts of His Majesty's dominions to which this Act extends for the term hereinafter mentioned in every original literary dramatic musical and artistic work, if—

(*a*) in the case of a published work, the work was first published within such parts of His Majesty's dominions as aforesaid; and

(*b*) in the case of an unpublished work, the author was at the date of the making of the work a British subject or resident within such parts of His Majesty's dominions as aforesaid;

but in no other works, except so far as the protection conferred by this Act is extended by Orders in Council thereunder relating to self-governing dominions to which this Act does not extend and to foreign countries.

(2) For the purposes of this Act, "copyright" means the sole right to produce or reproduce the work or any substantial part thereof in any material form whatsoever.

(3) For the purposes of this Act, publication, in relation to any work, means the issue of copies of the work to the public, and does not include the performance in public of a dramatic or musical work, the delivery in public of a lecture, the exhibition in public of an artistic work, or the construction of an architectural work of art, but, for the purposes of this provision, the issue of photographs and engravings of works of sculpture and architectural works of art shall not be deemed to be publication of such works.

Infringement of copyright.

2.—(1) Copyright in a work shall be deemed to be infringed by any person who, without the consent of the owner of the copyright, does anything the sole right to do which is by this Act conferred on the owner of the copyright: Provided that the following acts shall not constitute an infringement of copyright:—

(i) Any fair dealing with any work for the purposes of private study, research, criticism, review, or newspaper summary:

(ii) Where the author of an artistic work is not the owner of the copyright therein, the use by the author of any mould, cast, sketch, plan, model, or study made by him for the purpose of the work, provided that he does not thereby repeat or imitate the main design of that work:

(iii) The making or publishing of paintings, drawings, engravings, or photographs of a work of sculpture or artistic craftsmanship, if permanently situate in a public place or building, or the making or publishing of paintings, drawings, engravings, or photographs (which are not in the nature of architectural drawings or plans) of any architectural work of art.

Term of copyright.

3. The term for which copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author and a period of fifty years after his death :

Provided that at any time after the expiration of twenty-five years, or in the case of a work in which copyright subsists at the passing of this Act thirty years, from the death of the author of a published work, copyright in the work shall not be deemed to be infringed by the reproduction of the work for sale if the person reproducing the work proves that he has given the prescribed notice in writing of his intention to reproduce the work, and that he has paid in the prescribed manner to, or for the benefit of, the owner of the copyright royalties in respect of all copies of the work sold by him calculated at the rate of 10 per cent. on the price at which he publishes the work ; and, for the purposes of this proviso, the Board of Trade may make regulations prescribing the mode in which notices are to be given, and the particulars to be given in such notices, and the mode, time, and frequency of the payment of royalties, including (if they think fit) regulations requiring payment in advance or otherwise securing the payment of royalties.

Ownership of copyright, &c.

5.—(1) Subject to the provisions of this Act, the author of a work shall be the first owner of the copyright therein :

Provided that—

(*b*) where the author was in the employment of some other person under a contract of service or apprenticeship and the work was made in the course of his employment by that person, the person by whom the author was employed shall, in the absence of any agreement to the contrary, be the first owner of the copyright.

(2) The owner of the copyright in any work may assign the right, either wholly or partially, and either generally or subject to limitations to the United Kingdom or any self-governing dominion or other part of His Majesty's dominions to which this Act extends, and either for the whole term of the copyright or for any part thereof, and may grant any interest in the right by licence, but no such assignment or grant shall be valid unless it is in writing signed by the owner of the right in respect of which the assignment or grant is made, or by his duly authorised agent :

Provided that, where the author of a work is the first owner of the copyright therein, no assignment of the copyright, and no grant of any interest therein, made by him (otherwise than by will) after the passing of this Act, shall be operative to vest in the assignee or grantee any rights with respect to the copyright in the work beyond the expiration of twenty-five years from the death of the author, and the reversionary interest in the copyright expectant on the termination of that period shall, on the death of the author, notwithstanding any agreement to the contrary, devolve on his legal personal representatives as part of his estate, and any agreement entered into by him as to the disposition of such reversionary interest shall be null and void, but nothing in this proviso shall be construed as applying to the assignment of the copyright in a collective work or a licence to publish a work or part of a work as part of a collective work.

(3) Where, under any partial assignment of copyright, the assignee becomes entitled to any right comprised in copyright, the assignee as respects the right so assigned, and the assignor as respects the rights not assigned, shall be treated for the purposes of this Act as the owner of the copyright, and the provisions of this Act shall have effect accordingly.

Civil Remedies.

Civil remedies for infringement of copyright.

6.—(1) Where copyright in any work has been infringed, the owner of the copyright shall, except as otherwise provided by this Act, be entitled to all such remedies by way of injunction or interdict, damages, accounts, and otherwise, as are or may be conferred by law for the infringement of a right.

(2) The costs of all parties in any proceedings in respect of the infringement of copyright shall be in the absolute discretion of the Court.

(3) In any action for infringement of copyright in any work, the work shall be presumed to be a work in which copyright subsists and the plaintiff shall be presumed to be the owner of the copyright, unless the defendant puts in issue the existence of the copyright, or, as the case may be, the title of the plaintiff, and where any such question is in issue, then—

(*a*) if a name purporting to be that of the author of the work is printed or otherwise indicated thereon in the usual manner, the person whose name is so printed or indicated shall, unless the contrary is proved, be presumed to be the author of the work ;

(*b*) if no name is so printed or indicated, or if the name so printed or indicated is not the author's true name or the name by which he is commonly known, and a name purporting to be that of the publisher or proprietor of the work is printed or otherwise indicated thereon in the usual manner, the person whose name is so printed or indicated shall, unless the contrary is proved, be presumed to be the owner of the copyright in the work for the purposes of proceedings in respect of the infringement of copyright therein.

Exemption of innocent infringer from liability to pay damages, &c.

8. Where proceedings are taken in respect of the infringement of the copyright in any work and the defendant in his defence alleges that he was not aware of the existence of the copyright in the work, the plaintiff shall not be entitled to any remedy other than an injunction or interdict in respect of the infringement if the defendant proves that at the date of the infringement he was not aware and had no reasonable ground for suspecting that copyright subsisted in the work.

Restriction on remedies in the case of architecture.

9.—(1) Where the construction of a building or other structure which infringes or which, if completed, would infringe the copyright in some other work has been commenced, the owner of the copyright shall not be entitled to obtain an injunction or interdict to restrain the construction of such building or structure or to order its demolition.

(2) Such of the other provisions of this Act as provide that an infringing copy of a work shall be deemed to be the property of the owner of the copyright, or as impose summary penalties, shall not apply in any case to which this section applies.

Limitation of tions.

10. An action in respect of infringement of copyright shall not be commenced after the expiration of three years next after the infringement.

Special Provisions as to certain Works.

Works of joint authors.

16.—(1) In the case of a work of joint authorship, copyright shall subsist during the life of the author who first dies and for a term of fifty years after his death, or during the life of the author who dies last, whichever period is the longer, and references in this Act to the period after the expiration of any specified number of years from the death of the author shall be construed as references to the period after the expiration of the like number of years from the death of the author who dies first or after the death of the author who dies last, whichever period may be the shorter, and in the provisions of this Act with respect to the grant of compulsory licences a reference to the date of the death of the author who dies last shall be substituted for the reference to the date of the death of the author.

(2) Where, in the case of a work of joint authorship, some one or more of the joint authors do not satisfy the conditions conferring copyright laid down by this Act, the work shall be treated for the purposes of this Act as if the other author or authors had been the sole author or authors thereof:

Provided that the term of the copyright shall be the same as it would have been if all the authors had satisfied such conditions as aforesaid.

(3) For the purposes of this Act, "a work of joint authorship" means a work produced by the collaboration of two or more authors in which the contribution of one author is not distinct from the contribution of the other author or authors.

(4) Where a married woman and her husband are joint authors of a work the interest of such married woman therein shall be her separate property.

Works of foreign authors first published in parts of His Majesty's dominions to which Act extends.

23. If it appears to His Majesty that a foreign country does not give, or has not undertaken to give, adequate protection to the works of British authors, it shall be lawful for His Majesty by Order in Council to direct that such of the provisions of this Act as confer copyright on works first published within the parts of His Majesty's dominions to which this Act extends, shall not apply to works published after the date specified in the Order, the authors whereof are subjects or citizens of such foreign country, and are not resident in His Majesty's dominions, and thereupon those provisions shall not apply to such works.

Part III.

Supplemental Provisions.

Abrogation of common law rights.

31. No person shall be entitled to copyright or any similar right in any literary, dramatic, musical, or artistic work, whether published or unpublished, otherwise than under and in accordance with the provisions of this Act, or of any other statutory enactment for the time being in force, but nothing in this section shall be construed as abrogating any right or jurisdiction to restrain a breach of trust or confidence.

Interpretation.

35. "Artistic work" includes works of painting, drawing, sculpture and artistic craftsmanship, and architectural works of art and engravings and photographs;

"Architectural work of art" means any building or structure having an artistic character or design, in respect of such character or design, or any model for such building or structure, provided that the protection afforded by this Act shall be confined to the artistic character and design, and shall not extend to processes or methods of construction;

"Infringing," when applied to a copy of a work in which copyright subsists, means any copy, including any colourable imitation, made, or imported in contravention of the provisions of this Act.

(4) Where, in the case of an unpublished work, the making of a work has extended over a considerable period, the conditions of this Act conferring copyright shall be deemed to have been complied with, if the author was, during any substantial part of that period, a British subject or a resident within the parts of His Majesty's dominions to which this Act extends.

(5) For the purposes of the provisions of this Act as to residence, an author of a work shall be deemed to be a resident in the parts of His Majesty's dominions to which this Act extends if he is domiciled within any such part.

NOTES ON RECENT COPYRIGHT CASES IN FRANCE. By John W. Simpson [*F.*].

Plagiarism of an Elevation.

The "première Chambre du Tribunal," under the presidency of M. Gibou, has decided the extraordinary case of the architect M. Lenoir, who had discovered at Royan a copy of his Casino at Gourmalon; and whose grievance had been pleaded by his counsel Me. Maurice Tassin, in his address already reported ("Journal," 18.6.11). The finding of the Court is that the architect's work is entitled by its personal and original character to protection under the law of 11th March 1902 and that the elevation of the Amiot Private Hospital is only a servile copy thereof; but, the *mala fides* or culpability of the town of Royan not being established, it is dismissed from the case, leaving only the plagiarist M. Bureau. He is ordered to remove his name from the façade of the Amiot Private Hospital, where it is to be replaced by the words "built from the design of M. Lenoir"; and to destroy all post-cards, advertisements, or reproductions on which he is mentioned as author of the Royan building. Further, the Tribunal forbids any future reproductions without the name of M. Lenoir, while fining M. Bureau 500 fr. (£20) only, as damages; explaining this moderate fine in the following curious clause of the judgment:—

"Whereas the amount of damage suffered by an architect in a case of copying or forgery is very difficult to prove for although when an author painter sculptor or engraver is concerned the material damage caused either to the artist or to the purchaser of his rights is equal to the profit resulting from each object reproduced it cannot be the same in the case of an architect who not only sells to his client his plans and designs but *deprives himself* besides of the right to build a second house *similar to the first* for a third person without the consent of the owner unless otherwise agreed. Thus the architect suffers only moral damage as a result of the work which he has created being wrongly attributed to a plagiarist."

Note.—The italics are those of the reporter; and it is certainly difficult to follow the reasoning of the Court. If the architect had parted with his copyright, it would not be he, but the owner of the building, who was aggrieved by the piracy. If he had not parted with it, he had certainly not deprived himself of the right referred to. The result of the judgment is, however, of interest in its full recognition of an architect's artistic reputation.

Millet's "Angelus."

A Paris tradesman who had reproduced Millet's *Angelus*, "with modifications,"* in post-card form, sued another tradesman for 20,000 fr. (£800) damages for having, as he asserted, pirated his work.

In the course of the action, Me. Clars, representing M. Charles Millet, a son of the painter of the *Angelus*, intervened; claiming on his behalf the right to prevent the *Angelus* being travestied and an Order of the Court prohibiting both tradesmen from publishing their reproductions.

Me. Vannois having addressed the Court, a remarkable judgment was delivered from which the following passages are taken:—

"Whereas it is to the best interests of the community at large that every work should be protected and preserved in the form devised by the author and so handed down to posterity untampered with by meddlesome people actuated either by passing fashion or by desire of gain.

"And Whereas the reproduction made by the plaintiff entirely misrepresents the main idea of the painter

"And Whereas the defendant has for his part outdone the perversions introduced by the plaintiff in his reproduction. He indeed places a cap on the head of the peasant praying a neckerchief round the neck of the woman with bended head exaggerates the sharpness of minor portions of the picture and throws the glaring light of a hot May sun over the whole. . . .

"Whereas the plaintiff and the defendant have thus brought discredit upon the artistic reputation of the author of the *Angelus*. . . ."

The two tradesmen were consequently ordered to pay the costs of the action and forbidden "to make, sell, or place on sale mutilated copies of the work known as the *Angelus* by Millet under a penalty of 20 francs for each infringement."

* Probably with a view to evading copyright restrictions.

REVIEWS.

THE BAROQUE PERIOD IN ITALY.

Baroque Architecture and Sculpture in Italy. By Corrado Ricci, Director-General of Fine Arts and Antiquities of Italy. 4o. *Lond.* 1912. *Price* 25*s. net.* [*William Heinemann.*]

This is one of those admirably produced and invariably useful picture-books which constitute so large a part of the literature of the Fine Arts, and which modern methods of reproduction are rendering more perfect every year. For, after all, the number of those whose interest in art goes beyond a lazy glancing through of beautiful pages, or again of those who feverishly hurry over the leaves in search of what is euphemistically called "inspiration," is legion compared with the little band who go further and seek the reason in all these things. And it is on the whole a matter for congratulation among students of this Baroque period that after having shivered outside the orthodox circles for some years past they are now tolerated among the *virtuosi* and may even look for better things. For here we have a book which is aimed, one may assume, not at that struggling and poverty-stricken creature, the British architect, but rather at the vast army of people who, as has been said, lazily turn over pages. Whether it will also appeal to the particular sub-genus of architect who can afford to go in for modern competitions remains to be seen. It is probable that its title will prevent him opening a volume which might otherwise give him hints and ideas galore for provincial town-halls or metropolitan cinematograph theatres. But, all things considered, one may venture to criticise this book from the point of view of the studious minority and write as an architect about architecture.

Professor Ricci is an acknowledged authority on matters connected with Italian art, and he shows the breadth of his range by undertaking a work on a subject which has for the most part been left severely alone, or where noticed has been considered an appropriate object for jeers and sarcasm. It is, moreover, to his credit that although he occupies the position of "Director-General of Fine Arts and Antiquities" in his native country—the country which provided all the rules for architectural pedants—he is not so far tangled in red-tape as to be above taking an interest in the less conventional periods of its architecture.

It may be replied that to collect a matter of three hundred photos from the stock of various well-known photographers in Rome and to add an editorial note is a task of no great magnitude and implies no sympathy with the subject.

Let us consider the photographs and then the introductory letterpress.

Many of the illustrations are as familiar as the names of the photographers beneath them. Here are the Salute at Venice and the Gesù at Rome, the Bernini fountains and the Frascati gardens.

A full third of the subjects are Roman, more if one includes the Alban Hills. Yet even among his Roman views are many unfamiliar to those who have studied this period, *e.g.* the Palazzo Toni or dei Pupazzi and the Church of SS. Domenico e Sisto—and Rome most certainly deserves a third of any work on Italian Baroque architecture.

Central and Northern Italy is generously represented; indeed, many would dispute the claim of some of the buildings described here as Baroque, the Palazzo del Gran Guardia Vecchia for instance at Verona, and some of the severe and beautiful *cortili* of palaces in Rome, Florence, and Genoa.

To the South, in spite of admitting its importance in his introduction, Professor Ricci devotes but little space, probably owing to the difficulty of collecting examples in Rome, as the writer has found. It seems disproportionate to state in the letterpress that typical cities which "impress us as Baroque cities" are "Naples, Genoa, Bologna, Lecce, and Palermo," and then to find that Palermo has but five illustrations, Lecce only one, and Naples none at all! For, thanks to Spanish influence and a freedom from post-Renaissance shackles, the South—Apulia and Sicily especially—developed a Baroque style of remarkable picturesqueness and charm.

Then, apart from topographical choice, there will be many who will criticise the author's selection of examples. There will be those who would prefer more façades and fewer interiors, or *vice versâ*; and lastly, there will be those who dispute with Professor Ricci the true meaning and import of that misunderstood and ridiculous word "Baroque."

Nobody really knows what it means, or how it came to mean what each man thinks it means and everybody else thinks it does not mean. The author is shaky and gives us a choice of half a dozen possible derivations from as many languages.

It would make too long a story here to explain exactly where Professor Ricci draws the line, but some examples mentioned above will show that he includes many buildings of classic severity. Perhaps it will best suit the case to say that, in his opinion, "Wonder was the sentiment most in harmony with Baroque art," and that he quotes in support of his claim "the Baroque poet *par excellence*, the Cavaliere Marino:"

> È del poeta il fin la maraviglia
> Chi non sa far stupir vada alla striglia.

Or in other words, the Professor and the Poet agree that the aim of Baroque Architecture is to make men marvel by its beauty, its daring, its richness, its size, or even its strangeness. One might add that this attempt to create wonder is nearly always conscious. So at the outset and throughout Baroque architecture we find ourselves quit of any possibility of "sermons in stone," lofty ideals in hideous gargoyles, soaring songs in lofty spires, and all those good and pretty things that

the non-architectural lecturer on architecture makes such play with at his afternoon gatherings. For Baroque architecture is always masculine, strong, original, heavy, sometimes tipsy, but never feeble or anæmic. It typifies the lusty spirit of a merry, proud, wealthy, confident, and careless age, pleased with itself and anxious to tell the world so. And there are no architects to-day who can afford to despise the long series of fine examples illustrated in these pages.

The reproductions are beyond criticism, and the photographs from which they are taken are of an unusually high standard. One could wish that a little more care had been taken to render the letterpress into accurate English, for sundry printers' errors invited the writer's attention to the last page, where he found that the printing had been done in Stuttgart, presumably in several languages for international consumption.

Perhaps the most interesting and typical para-

S. CARLO A' CATINARI, ROME, CAPPELLA DI S. CECILIA (*c.* 1685), BY ANTONIO GHERARDI.

graph for quotation from this introduction is the following :

It has been said that when one wanders through the ancient streets and squares of Siena, one's sense of fitness is outraged by the sight of pedestrians with umbrellas and overcoats, and that when, on the other hand, the Companies of the various Contrade sally forth equipped for the Pallio, or some religious confraternity passes along with faces muffled in cowls, a cross-bearer in front, one recognises the harmony that formerly existed between costumes and buildings, dwellings and inhabitants. The impression is perfectly sound. But why, then, when we look at a Baroque building, do we not admit similar effects, and reason with the same justice? Why do we not allow that the lack of unity may result from the difference of costume, and the changes that have come about in the style of decorations?

Let us take the magnificent theatre interiors built by the Bibbiena. Many critics consider them overloaded with consoles and balustrades, and tormented with curves. But if for the audiences of to-day (the men with bald or closely cropped hair in their tightly fitting gray or black coats, the women with their prim coiffures and discreetly rouged complexions), it were

PALAZZO TONI, ROME, CALLED THE PALAZZO DEI PUPAZZI (EIGHTEENTH CENTURY).

possible to substitute the resplendent public of the days when the Bibbiena designed these theatres, the damasks, jabots, laces, embroideries, ribbons, feathers and flowing wigs, and if we could illuminate these with thousands of candles inside and outside the boxes, would the architecture seem as heavy as it now does?

In the saloons of the Baroque palaces, the elaborately decorated stucco ceilings often seem about to crush us; but if we were to remove our miserable modern furniture, if we were to strip the walls of their cheap flowered papers, chromolithographs and little photographs, and replace them by the old imposing furniture, with its painting and gilding, the tapestries, candelabra, pictures and mirrors with frames in high relief, would not these ceilings seem to rise more lightly?

Would our Roman palaces seem to threaten to crush the anæmic crowd that hurries through our streets to-day, newspaper in hand, and our ill-kept carriages, drawn by horses which exhibit more bone than muscle, if these could be transformed into a multi-coloured throng in every variety of costume, circulating among the gorgeous coaches of princes, cardinals, and popes, adorned with joyous allegorical and mythological figures and gilded reliefs, lined with satin, driven by splendidly dressed coachmen, attended by magnificent lackeys, and drawn by great Saxony horses covered with rich draperies, pendants, and bows of ribbon, their heads crowned with nodding plumes of various colours?

Nor must the historian overlook the psychological relation between Baroque Art and the society which produced it, a society of conflicting faults and virtues, of heroism and debasement, of scientific initiative and of superstition, full, in a word, of contrasts and contradictions, of bombast and exaggeration, but sustained by the conviction that there was still much beauty to discover in the domain of art, much truth in that of science, much goodness in that of philosophy.

M. S. Briggs [*A.*].

OLD SLAV HOUSES.

Title.—Ethnographische Beiträge zur Germanisch-Slawischen Altertumskunde von K. Rhamm. Zweite Abteilung. Urzeitliche Bauernhöfe in Germanisch-Slawischem Waldgebiet. Zweiter Teil.

Sub-Title.—Germanische Altertümer aus der Slawisch-Finnischen Urheimat. Erstes Buch. Die Altslawische Wohnung von K. Rhamm. Mit 45 in den Text Eingedruckten Abbildungen. [*Braunschweig: Kommissions-Verlag von Friedrich Vieweg und Sohn.*] *Pp. x*, 432, *ii.*

Some time ago I had the honour to review a former book by Herr Rhamm in this Journal, and, in continuation of his study of the inter-relation of Slavs and Teutons, Herr Rhamm wrote this volume on the Old Slav dwelling.

According to the testimony of the new *Encyclopædia Britannica*, the Slavs are the most numerous and widespread race in Europe. There are now three principal divisions, viz.: the East Slavs (Russians), West Slavs (Poles, Bohemians, &c.), and South Slavs (Serbo-Croats &c.), but when they formed one people they were settled to the North-East of the Carpathians in the basins of the Vistula, the Pripet, and the Upper Dniester. Those of the West and South have come under the influence of other cultures, and the author decides that the Russian house is the most valuable evidence in his inquiry, as the Russian culture has been least affected by other cultural influences.

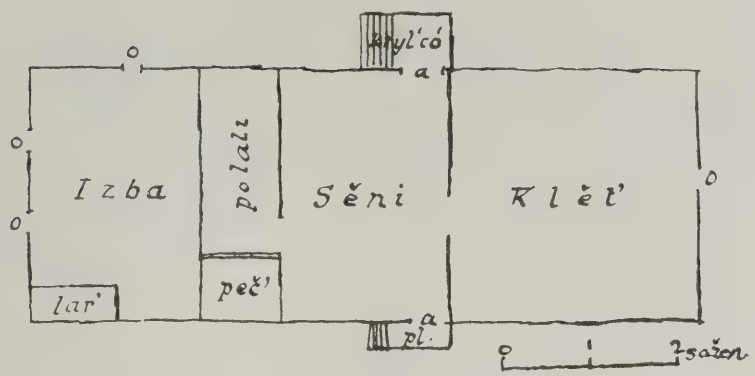
Although the Slavs are so numerous, there is practically no contemporary literature for use in the study of the early buildings, of which we have such an abundance in England, and in addition there are no old houses which are old in the sense in which we in England may use the word. But this is not so important in view of the extreme conservatism of the Russians: as an instance, the answer of the peasant farmer (*Bauer*) of White Russia to all suggestions of improvements is "Our fathers have been so accustomed."

The old Russian house in its early form consisted of a single room, with the door in the gable, and usually also a lightly built vestibule (*Vorhaus*) before it. The dwelling-house, which everywhere bore the name *izba* (originally *istuba*), possessed no hearth, but a closed stove (*Ofen*). The vestibule (*sěni*) possessed neither hearth nor oven, but was always cold, and appears to have always been closed on all sides, being in this essentially different from all gable-vestibules (*Giebel-Lauben*) on Germanic soil, which were always entirely or partly open. The *sěni* was used as a store, as a dining room in summer and a shippon in winter. Everywhere the old Slav house was without a hearth, and herein was its essential difference from the old German house.

The extension of such a house was made in the direction of its length. This extension was usually accomplished by the addition of a store building (*klět'*) for eatables and clothing, which is placed on the other side of the vestibule and united to it; it is, the author considers, accomplished by the joining of two separate buildings, the *izba* and the *klět'*, by the usually lighter-built *sěni*. In this manner originates a three-roomed house, consisting of two rooms united by a cold vestibule. Such houses are to be found to-day, not only among the poorer classes, but also as the regular building of the usual peasant farmers (*eigentliche Bauern*).

After a warning against the accepted notion that all simple buildings are atavistic arrears, Herr Rhamm proceeds with the steps (*Stufen*) in the development of the house. In some districts, the house consists of an *izba* only without a *sěni*, and formerly in Polesje, the marshy and remote district on both sides of the Pripet, the *izba* was on one side of the street (*Gasse*) and the *klět'* on the other. Now the *klět'* is part of the house.

Herr Rhamm recognises two forms of the Russian house, the higher or story-house (*Hochhaus* or *Stockhaus*) of the North, and the lower house (*Niederhaus*) of south-western Great Russia, Little Russia, and White Russia. The former is raised above the ground, with a sort of low ground-story, *podpolje*, below, while the latter is placed on the ground. Another distinction is that in the story-house the *pol*, the timber floor appears to



PLAN OF A RUSSIAN STORY-HOUSE (after Linoz).
a, doors ; *o* windows; *pec'*, stove; *pl*, ploščadka, landing and ladder (as Kryl'có).

shear the whole house through, as the author expresses it, while in the lower house the *pol* only cuts through a part of the house and forms a kind of stage. More than one hundred pages are given to the parts of the house, the stove, the *čulan*, the sleeping platform (*Schlafbühne*), &c. The construction of the Slav buildings is also dealt with fully, *e.g.* twenty pages are given to the thatch alone.

The second part of the book is concerned with the origin of the parts of the Slav house ; the author decides that it is derived from a Scandinavian source. It is somewhat usual with German writers to find that the culture of neighbouring nations is due to German influence (*Einfluss*). The Russian *izba* is the Old Scandinavian *stufa*, and the Old Scandinavian *bath-stufa* and *laugar-hus*, both bath chambers, give the Old Slav *banja* and *laznja*. The Russian *čulan*, a part of the *izba* partitioned off where the food is prepared, is derived from *kylan* (English kiln), meaning in Scandinavian a cooking house, perhaps with a sleeping-place. The Russian *pol* (the word is only Russian, but *polica* is general in Slav languages) is from Old Scandinavian *pallr*, the sitting platform (*Bühne*) on both sides of the *stufa*. The Old Slav *golbŭ*, now in Russian *golbec*, that is the enclosing partition (*schlankartiger Verschlag*) to the stove, is the Old Norse *golf*, the foremost division of the old *stufa*. The Russian *šelom* is the Swedish *hjelm*, both meaning a *Schutzdach*. The lar' (*see* diagram), a combined chest-bench (*Kastenbank*), may be compared with the "lair" of the South Yorkshire charcoal-burners' hut.

I regret to state that Herr Rhamm died at Innsbruck in November last : his life had been devoted to research, and he was able to give the whole of his time to the work, with more satisfactory results than is the case when the writer's principal interests lie elsewhere. It is a defect of most of the English books on architecture and building that they are written by amateurs, by which I mean that they are "written in the intervals of business" by men whose principal interests necessarily lie in the practice of their profession. C. F. Innocent [*A.*].

Note.—This review is adapted from a lecture given by the reviewer to the Sheffield Society of Architects and Surveyors at the University on 11th January 1912.

CORRESPONDENCE.

The R.I.B.A. and Architects' Registration.

To the Editor, Journal R.I.B.A.,—

Sir,—In view of the feeling aroused by the recent treatment given to this question, the pertinent remarks contained in Mr. Collard's letter form a useful contribution to a somewhat delicate controversy. Perhaps I may be allowed to add one or two comments :

(*a*) According to the figures quoted at the meeting of 8th January by Mr. H. Shepherd [*A.*] there are, apparently, something like seven thousand practising architects in the United Kingdom. Assuming this to be so, has any serious attempt been made to ascertain their views on the registration question in order to show the strength (or otherwise) of the movement from a Parliamentary standpoint ?

(*b*) Does not the present oft-invoked "mandate" in favour of the Institute's Registration Scheme rest on the expressed opinion of 87 members voting at the meeting of 4th March 1907, at which certain resolutions on the subject were passed ? Is this considered to be adequate authority for legislation affecting the interests of a numerous and important profession ?

(*c*) Presuming the somewhat remote possibility of a majority of the architects of the United Kingdom really desiring legal status of the nature proposed—no general or widespread indication of which is yet apparent—and that the promotion of Architects' Registration must inevitably be sought, is it to be assumed that it cannot be arranged for on lines similar to those adopted by other professions ?

The Registration of Architects is, it should be remembered, not a purely Institute question at all, and in view of the sharp division of opinion which has always existed both as to its wisdom and practical possibilities, never could, with any justice, be made an excuse for tampering with the conditions, or status, of Institute membership.

Many of us have, I am sure, genuine sympathy with the Council in their honourable attempt to carry through the recently discussed—but unfortunate—policy initiated by their predecessors, and to which they found themselves, to some extent, committed. Such feelings, however, cannot be allowed to influence considered judgment on the merits of the questions concerned.

Mr. Collard humorously refers to the danger of the "demnition bow-wows"—some of us may feel inclined to indicate by a stronger expression than this the direction in which an apparently small section of its members seems desirous of dragging the Institute.—Faithfully yours,

FREDK. R. HIORNS [*A.*].

The Reiterated Warning.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—With regard to Mr. Crow's suggestion in the JOURNAL for 13th January, that the Institute could not engage in a better work than in forwarding the movement for the creation of a worthy imperial city, and his recognition of the fact that there must be a "connecting link in the legislative machine by means of which the services of the Advisory Council shall be automatically brought into action," it is interesting to know that in Cleveland, Ohio, which is a commercial city and has been termed the Sheffield of America, public-spirited men have brought about a harmony of action among the various complicated political agencies which seems almost ideal.

To quote from *The City*, by Frederick P. Howe, Ph.D.:—"Through the aid of *State legislation* a Board of Supervising Architects was appointed, endowed with a final veto upon the location, plans, and style of architecture of all the public buildings. The members of this commission were employed by the city at generous salaries and given absolute freedom in the working out of a ground plan for the arrangement and development of the scheme. The commission is also entrusted with the problem of improving the public square, the approaches to the sites of the public buildings, and the development of the lake front.

"The commission thus appointed was at work for more than two years, and has presented the results of its labours in a completed plan for the arrangement of the public buildings."

London is, of course, a more complicated problem, but still it is interesting to see that others are doing what we are still talking about.

Yours truly,

FLORENCE F. HOBSON [*Licentiate*].

9 CONDUIT STREET, LONDON, W., 10*th Feb.* 1912.

CHRONICLE.

The Prizes and Studentships, 1911-12.

The Annual Exhibition, held in the Institute Galleries, of the works submitted in competition for the Prizes and Studentships in the gift of the Royal Institute was open to the public from the 23rd January to the 5th February. The visitors' book showed nearly a thousand signatures, but as a very large number of members and others had the opportunity of seeing the drawings at the meetings of the 22nd January and 5th February, and at the "At Home" on the 24th January, the visitors' book does not, as in former years, represent the actual numbers of those who inspected the works. The number of competitors was sixty-one, as against sixty-four last year when there was the additional competition for the Saxon Snell Prize. The guests at the Council Dinner on the evening of the Presentation of Prizes included Sir Henry Miers, Principal of the University of London; Sir Alfred Keogh, K.C.B., Rector of the Royal College of Science and Technology; Professor Selwyn Image, Slade Professor of Fine Art, Oxford; Dr. A. C. Headlam, Principal of King's College, London; Dr. T. Gregory Foster, Provost of University College, London; and Professor E. A. Gardner, Yates Professor of Archæology, University College, London. At the General Meeting, past Presidents were represented in Sir Aston Webb, C.B., C.V.O., R.A., and Sir Ernest George, A.R.A. The bad weather was doubtless responsible for the small attendance of members recorded in the Minutes, but students and their friends were present in force.

Board of Trade System of Labour Exchanges.

An extensive system of Labour Exchanges has now been established by the Board of Trade throughout the United Kingdom. This system offers very wide possibilities of benefits to architects and builders requiring skilled or unskilled workpeople in trades or professional occupations, whether men, women, boys, or girls.

Its organisation is as follows:—The United Kingdom is divided into ten divisions, the officers in charge of which are assisted by Advisory Trade Committees composed of panels of equal numbers

of representatives of employers and workmen. The divisions again are sub-divided into the various exchange areas. The whole of these offices are in communication by telephone, and orders that cannot be filled in one division are circulated throughout any other division in which it is thought suitable applicants may be found.

Managers are instructed to make every endeavour to supply the most suitable workmen or professional assistance available. This can be done by reference to the registers, which contain the particulars of those men who have visited the Exchange within the week. No regard is paid to the fact that some applicants have been on these registers longer than others; industrial efficiency alone is considered when selections are made.

If necessary, the cost of the fare can be advanced to enable a workman to travel to a job in some other district than that in which he lives, on the understanding that the cost is repaid to the Board of Trade by weekly instalments.

Precisely the same facilities are afforded for women as for men.

The working of the Juvenile Departments requires special mention. In addition to the Advisory Trade Committees to which reference has been made, there are in many of the Exchanges Juvenile Advisory Committees composed of representative employers, representative workmen, and persons interested in the welfare of children. It is hoped that the experience of these Committees will materially assist the officials at the Exchange in the placing of juvenile applicants.

The members attend at the Exchange to consider the orders for juvenile workers, and to assist in selecting the most suitable applicants for the particular openings offered. A report concerning each child leaving school is received from the head teachers, and information is available as to the child's physique and as to any special aptitudes disclosed during or since its school career. The object is to ensure that, as far as possible, carefully chosen applicants only shall be submitted to employers, whose time in interviewing others obviously unsuitable will be saved. Architects and builders will realise the advantage of a system which makes it possible for them to select their office boys and junior draughtsmen from those boys only who have been found to have a particular aptitude for the work (*e.g.* are fond of drawing) instead of at haphazard. It is also hoped by friendly counsel and supervision to influence juveniles to see that they do not continually change their work and positions for no good reason. Employers can materially assist in this "after care" work by submitting periodical reports on the progress made by young workers.

A list of the Exchanges at present open throughout the United Kingdom can be obtained by application to the General Manager, Board of Trade Labour Exchanges, Queen Anne's Chambers, Westminster, S.W. No fees are charged.

Building Prospects in South Africa.

Reviewing the immediate past and discussing the possibilities of the future for architecture in South Africa, the *African Architect* considers that both may be contemplated with satisfaction by architects and builders, especially as regards Johannesburg. The following is quoted from the January number just to hand:—

The figures published monthly by the Town Council indicate a remarkably healthy state of affairs. For the first six months the building returns amounted to £750,000 in value, while for the five latter months of the year there was an increase of over £100,000, the returns showing £869,000. The Government have also been a considerable factor in upholding the status of the building trade, their contracts in Pretoria being on a vast scale, while their substantial schools are to be found dotted not only in every hamlet throughout the Province, but are frequently to be met with perched on some lonely kopje far from any human habitation, but serving the needs of adjoining farms. Since the inception of the Education Department, many millions have been spent on school buildings, and the gigantic staff of the Public Works Department have had their energies taxed to the utmost to cope with the work. It must be confessed that practically all building operations of any magnitude have been confined to the Transvaal, and for the moment the requirements of the coast ports appear to have been provided for in the matter of accommodation. That this is only temporary, however, is proved by the experience of past years, and even now East London has again begun to outgrow its present requirements, and, after a temporary lull, building is again becoming brisk at the Eastern Province port. Outside Johannesburg, the Reef townships have shown most activity, and Germiston and Krugersdorp have both become important centres and are steadily growing. Benoni, however, has made the most marked progress. Barely two years ago it was merely a hamlet; it now vies with many of the older established townships in the beauty and size of its buildings. Scattered along the Reef for a distance of fifty miles there is a population of over a quarter of a million, a greater number than is to be found in Johannesburg itself, and competent authorities estimate that this number will be almost doubled in the course of a few years. Factories of various kinds are being established daily, and from the report of the Inspector of Labour the number of factories established in Johannesburg itself approaches nearly four hundred and fifty. This alone is sufficient to condemn those who persistently decry the Rand and prophesy a *débâcle* at an early date. It must be admitted that most of the pessimists belong, as it were, to a former generation, and cannot bring themselves to realise the enormous change that has taken place during the last decade. In the early history of the Rand, the great factor in the prosperity of the town was the Stock Exchange. When the market boomed everything prospered, and *vice versa*. It was the index whereby the prosperity of the country at large was gauged, and when, eventually, it ceased to be a power in the land, all the old-timers confidently looked for a complete collapse. The day when the movements of the market ruled the destinies of the country have long since ceased, and in its place industries and manufactories have arisen which have placed South Africa in an infinitely

more secure position than it occupied before the war. In sympathy with the upward tendency of trade, architecture has kept well abreast of the times, and many of the buildings erected within the past two years would adorn any of the great European centres. Even such an authority as Mr. T. E. Collcutt, former President of the Royal Institute of British Architects, was astounded at the many able and brilliant designs which he was called upon to adjudicate upon in connection with the Transvaal University Buildings. There can be no question that year by year architecture is being lifted on to a higher plane; and, with the diffusion of wealth, the standard of taste and luxury has risen considerably. Though, as before remarked, the year 1911 can be termed satisfactory, high-water mark has been by no means reached, and there is every indication that the year in front of us holds out rich stores both to architects and craftsmen. With work disseminated over such a wide area, there is very little likelihood of the congestion witnessed in Johannesburg during 1903 and 1904. In those days there was not an architect to be found in any of the smaller towns and villages of the Union: every architect made either for the Rand or Pretoria, or the coast ports. All building in the villages was left entirely to the workmen, and their handiwork is to be found in the many inartistic and inconveniently planned homes in these hamlets.

The Consistency of Concrete.

A circular letter of inquiry on the subject of the Consistency of Concrete has been addressed to the members of the Concrete Institute, in which it was suggested that a specification as drafted would be of service, pending experiments and tests that ought to be made to determine the exact proportion of water to be used in concrete in order to obtain the best mixture. This specification, as now slightly modified by the Committee, is as follows:—

Consistency of Concrete.—For mass concrete the quantity of water added to the other constituents shall be sufficient to make a plastic mixture which, after thorough ramming, will quiver like a jelly.

For reinforced concrete the quantity of water added to the other constituents shall be such that the plastic mixture is capable of being rammed into all parts of the moulds and between the bars of the reinforcement.

Note.—In dry or hot weather the quantity of water shall be increased in order to allow for evaporation.

Fifty-eight replies * were received, and have been carefully considered by the Reinforced Concrete Practice Standing Committee of the Concrete Institute, who have come to the following conclusions:—

1. It is inadvisable to lay down any definite rule as to the percentage of water to be used in mixing concrete, owing to the varying conditions which obtain. The proposed specification is difficult to improve upon, and seems to meet with general agreement.

2. The strength of concrete apart from any reinforcement increases as the amount of water used in mixing is decreased, this being more particularly the case during the earlier stages of the maturing of the concrete. Eventually the wetter of two mixtures will approach more nearly to the drier in strength.

3. In reinforced concrete, particularly in such portions as may contain a large amount of reinforcing bars or the like placed closely together, it is essential that the concrete should be sufficiently wet to pass between the reinforcing bars, and to thoroughly surround every portion of the steel. This should be ensured even at the expense of having the concrete wetter than would otherwise be desirable.

Where the reinforcement is not very closely spaced it is unnecessary for the concrete to be so wet.

4. Other conditions being the same, the drier the concrete the more quickly will it set and mature. This is of importance when there is any danger of green concrete being attacked by frost.

5. The wetter the concrete the greater is the tendency to contract during the process of setting and maturing. Appreciable contraction may sometimes continue for a period of several years.

6. The Committee is divided as to the advisability of determining by some means of mechanical test the exact degree of "wetness" or consistency of concrete after mixing. If some scale of consistency were adopted, it would be possible to specify that concrete for any particular portion of the work should be of such and such a consistency, after mixing. This would not, of course, be at all the same as specifying that any particular amount of water should be used in mixing such concrete, owing to differences of atmospheric temperature, aggregate, etc.

The advocates of the institution of some such scale of consistency are of opinion that the Concrete Institute should carry out tests on the subject.

* A summary of these replies appears in the current issue of *Concrete and Constructional Engineering.*

The Crystal Palace and the National Folk Museum.

Colonel G. T. Plunkett, late Director of the Dublin Museum, in a letter to *The Times* a few days ago, writes in support of the proposal to establish at the Crystal Palace a National Folk Museum, illustrating the history, conditions of life, arts, and fashions of the inhabitants of the British Isles.* In such a museum relics of all periods since men first left traces of their existence in the land would be shown in historical sequence, and, as the ground at Sydenham affords space for the reproduction of dwellings of various periods, decorative arts, furniture, household objects, weapons, and dress would be shown as if actually for use.

Among other objects (Colonel Plunkett suggests) which could be reconstructed with sufficient accuracy are a lake dwelling, British fortified camp, Roman

* Full particulars of the proposals put forward for the formation of the Museum appeared in the JOURNAL for 13th January, p. 187.

British villa, Saxon thane's house, Norman stockaded castle, mediæval keep, baronial hall, Elizabethan house, and so on, to interiors in the styles of Inigo Jones, Adam, and other architects, and furniture of the great eighteenth-century makers; in their proper places would be shown on lay figures the dress of each period.

Nor need we end with even recent times; some commonplace things of to-day may by lapse of years become rarities eagerly sought by collectors of the future, so it would be right to arrange for the continuation and development of the series for an indefinite future.

Probably the Crystal Palace grounds would also afford space for another series consisting of small homesteads of various countries, each equipped and furnished in the same manner as above described for the National Folk Museum; in this should also be shown by each dwelling an account of the average income and expenditure of a family to enable the visitor to see clearly and compare with each other the conditions and standards of living in different countries. A similar exhibition of life in towns might also be arranged. Such exhibits should be useful to social reformers and to the general public, who generally know little of the ways of life in foreign countries.

The New Government Buildings, Winnipeg.

The President, Mr. Leonard Stokes, has been appointed by the Government of Manitoba to act as Assessor in the competition for the new Government Buildings in Winnipeg. It is expected that he will leave England about the middle of next month, and will be away for several weeks.

The Pierpont Morgan Collection.

The Board of Education announce that the gradual withdrawal by Mr. Pierpont Morgan of the collection exhibited by his kind permission on loan at the Victoria and Albert Museum began with the removal of the Enamels on Monday, 5th February. No definite arrangements for the withdrawal of any other part of the collection have as yet been made, but it is anticipated that the next portion to be removed will be the collection of silversmiths' work. A further announcement will be made in due course.

Obituary.

John Codd, who died in London last October in his seventy-seventh year, was an Associate of the Institute for thirty-one years. Born at Lea, near Gainsborough, he early came to London and entered the office of the late John L. Pearson, R.A., with whom he spent the greater part of his professional career. In this capacity he worked on some of the most remarkable buildings of the Gothic revival, as well as on the restoration and preservation of many ancient cathedrals and churches. He accumulated a vast store of knowledge of Gothic art, not only in the course of his daily work, but during holidays and leisure times which he devoted largely to his favourite pursuit. The result of his studies was shown in contributions to public journals, notably in the *Lincoln Diocesan Magazine*, where he discussed problems relating to the Shrine of St. Hugh in Lincoln Minster, and more recently in this Journal (Vol. XVIII. pp. 208, 381), where he criticised certain theories put forward as to the original form of St. Hugh's Choir. In addition to domestic buildings and works of restoration he was responsible for the design of St. Peter's Church, Bentley, near Doncaster, and, his last work, a beautiful little Chapel for the Community of St. Peter at Kilburn. He had a taste for literature, and published two volumes of verses. In his position of manager to Mr. Pearson he was brought into relationship with a large number of younger assistants and pupils now scattered in various parts of the globe. It was, perhaps, in this connection that he exercised his widest influence. His large store of knowledge was ever at the service of inquirers, and his modest and sympathetic demeanour made him easy of approach. Gladly would he learn, and gladly teach.—Arthur D. Sharp, *Licentiate*.

William Glover, whose death occurred on the 18th January at the age of eighty-two, had been a Fellow of the Institute since 1899. Until his retirement to Windsor, his native town, in 1901, Mr. Glover had practised in Newcastle-on-Tyne. Among his chief works there were the buildings of the Royal Jubilee Exhibition of 1887, and an extensive range of premises, with offices, work and pattern shops, and stores, and an approach road from St. Peter's Station, at St. Peter's Works, for Messrs. R. and W. Hawthorn Leslie and Co. Mr. Glover was President of the Northern Architectural Association for the Sessions 1899–1901, and during that period served on the Institute Council as representative of the Association. He made many generous gifts to the Northern Association, including the Presidential Chair and Badge (see illustration, Journal, 12th February 1898), and various sums, amounting to over £2,000, for the acquirement of the Association's premises in Higham Place, Newcastle-on-Tyne, and for the furtherance of their educational schemes. He gave £800 to the Newcastle Corporation as a fund for the purchase, for the Laing Art Gallery, of works of art by local artists. He also endowed two beds in the King Edward VII. Hospital at Windsor at a cost of £2,000. He was a generous subscriber to the Architects' Benevolent Society, contributing besides his annual subscriptions a sum of £300 to commemorate his association with the North of England and the Northern Association, delegating to the latter body the privilege of recommending applicants for relief from the counties of Northumberland and Durham. At the General Meeting of the Institute last Monday, on the motion of the Hon. Secretary, it was resolved that a message of sympathy and condolence be addressed on behalf of the Institute to his nearest relatives.

MINUTES. VII.

At the Seventh General Meeting (Ordinary) of the Session 1911–12, held Monday, 5th February 1912, at 8 p.m.—Mr. Leonard Stokes, *President*, in the Chair; entered in the attendance-book the names of 17 Fellows (including 9 members of the Council), 14 Associates (including 1 member of the Council), 8 Licentiates, and numerous visitors—the Minutes of the Meeting held 22nd January 1912, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease of William Glover, *Fellow*, Past President of the Northern Architectural Association and sometime Member of the Institute Council, and referred to his generous gifts and benefactions to the Northern Association and other institutions: whereupon, on the motion of the Hon. Secretary, the Meeting resolved that the regrets of the Institute for the loss it had sustained be entered on the Minutes of the Meeting, and that a message of sympathy and condolence on behalf of the Institute be conveyed to Mr. Glover's nearest relatives.

The decease was also announced of Francis William Humphreys, elected *Associate* 1880, *Fellow* 1892; and John Codd, *Associate*, elected 1880.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President—viz. Charles Alfred Harding, *Associate*, and William Charles Manning and Herbert C. Ingram, *Licentiates*.

The President announced that the Council proposed to submit to His Majesty the King the name of Mr. Basil Champneys, B.A. Cantab., as a fit recipient of the Royal Gold Medal for 1912, in recognition of his executed works as an architect.

The President delivered an ADDRESS TO STUDENTS, and Mr. Gerald C. Horsley [*F.*] read a CRITICISM OF THE DESIGNS AND DRAWINGS submitted for the Prizes and Studentships for the current year.

On the motion of Sir Henry Miers, D.Sc., F.R.S., Principal of London University, seconded by Sir Alfred Keogh, K.C.B., Rector of the London College of Science and Technology, a vote of thanks to the President and Mr. Horsley was carried by acclamation and briefly responded to by the President.

The Presentation of Prizes was made by the President in accordance with the Deed of Award, and the Travelling Students were introduced, as follows:—

INSTITUTE SILVER MEDAL (ESSAYS) AND TWENTY-FIVE GUINEAS.
- The Medal and cheque for £26 5*s.* to Mr. T. Harold Hughes.

INSTITUTE SILVER MEDAL (MEASURED DRAWINGS) AND TEN GUINEAS.
- The Medal and cheque for £10 10*s.* to Mr. A. E. Maxwell.
- Certificate of Hon. Mention to Mr. A. B. Allen (represented by Mr. Noël H. Leaver).
- Certificate of Hon. Mention to Mr. Walter M. Keesey.

SOANE MEDALLION AND £100.
- Certificate of Hon. Mention to Mr. William Friskin (awarded also £50 under conditions as to travel).
- Certificate of Hon. Mention to Mr. Piet de Jong (awarded also £50 under conditions as to travel).
- Certificate of Hon. Mention to Mr. C. A. Harding.
- Certificate of Hon. Mention to Mr. Bertram Lisle.

OWEN JONES STUDENTSHIP (£100).
- Certificate and cheque for £50 (being first instalment) to Mr. Noël H. Leaver as winner of the Studentship.

PUGIN STUDENTSHIP.
- Mr. James Macgregor introduced as the winner of the Studentship.
- Certificate of Hon. Mention to Mr. C. Peake Anderson.
- Certificate of Hon. Mention to Mr. W. J. P. Jones (not present).
- Certificate of Hon. Mention to Mr. J. R. Leathart.
- Certificate of Hon. Mention to Mr. R. Norman Mackellar (represented by Mr. A. T. Scott).

TITE CERTIFICATE AND £30.
- Certificate to Mr. Louis de Soissons as winner of the Prize.
- Certificate of Hon. Mention to Mr. Thomas H. Chalkley.

ARTHUR CATES PRIZE (FORTY GUINEAS).
- Cheque for £42 to Mr. J. B. F. Cowper as winner of the Prize.

GRISSELL GOLD MEDAL AND TEN GUINEAS.
- Gold Medal and cheque for Ten Guineas to Mr. T. Braddock as winner of the Prize.

GODWIN BURSARY (£65).
- Mr. Geoffry Lucas introduced as holder of the Bursary.

ASHPITEL PRIZE.
- Books value £10 to Mr. P. D. Hepworth (not present), winner of the Prize.

PUGIN STUDENTSHIP 1911.
- Medal and cheque for £40 to Mr. J. B. F. Cowper, Pugin Student 1911.

The proceedings then closed and the Meeting separated at 9.10 p.m.

Books Received.

Architecture: an Introduction to the History and Theory of the Art of Building. By W. R. Lethaby. Sm. 8o. Lond. 1912. Price 1*s.* net, cloth; 2*s.* 6*d.* net, leather gilt. Williams & Norgate.

Pompeian Decorations. Illustrated by a Series of Coloured Drawings reproduced by Three-colour Process and by many Pencil Drawings reproduced in half-tone. Accompanied by a Descriptive Text. By R. A. Briggs [*F.*], Soane Medallist. Fo. Lond. 1912. 25*s.* net. B. T. Batsford, 94 High Holborn.

Jacobean Architecture and the Work of Inigo Jones in the Earlier Style. With 14 plates and 4 appendices. By Arthur T. Bolton [*F.*], author of "Examples of Mosaic Paving," "The Dome as the Basis of an Architectural System," &c. Fo. Limited edition. Price 1*s.* net, from the Author, 28 Victoria Street, S.W.

Elizabethan Interiors. By C. J. Charles. Fo. Lond. and New York. 1912. Price 42*s.* net. George Newnes Limited, Southampton Street, Strand, W.C.

Romanesque Architecture in France. Edited, and with an Introduction, by Dr. Julius Baum. 4o. Lond. 1912. Price 25*s.* net. William Heinemann.

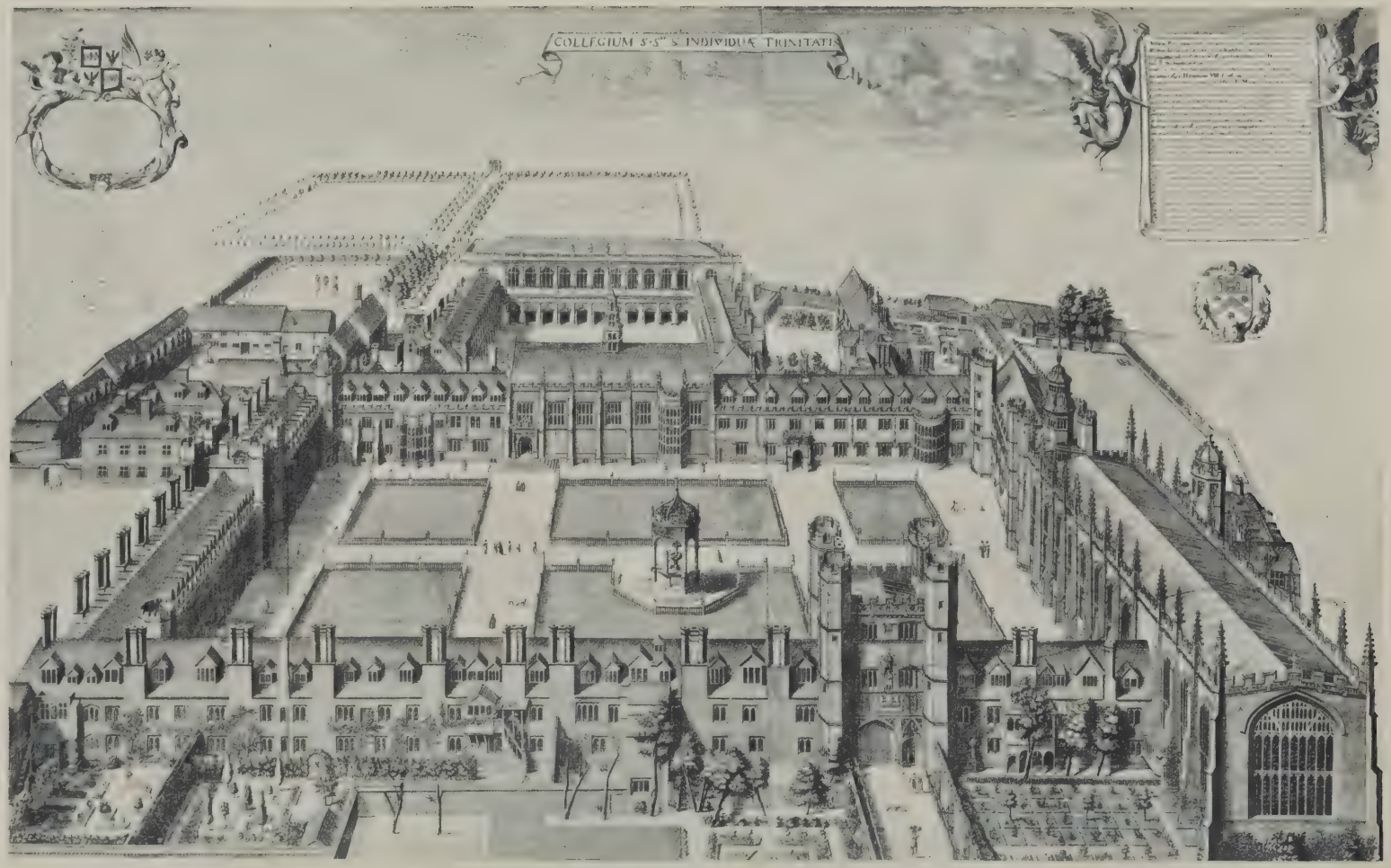
The Construction of Lombard and Gothic Vaults. By Arthur Kingsley Porter. 4o. New Haven, U.S.A., and Lond. 1911. Price 8*s.* 6*d.* net. Henry Frowde, Oxford University Press.

Spons' Architects' and Builders' Pocket Book Memorandum Section. Also Price Book and Diary. 2 vols. 5*s.* net. E. & F. N. Spon, Ltd., 57 Haymarket.

Builders' Quantities. By Horace M. Lewis, Associate Institution of Municipal and County Engineers. Sm. 8o. Lond. and New York, 1911. Price 1*s.* 6*d.* net. E. & F. N. Spon, Ltd., 57 Haymarket.

Excavation of the Roman Forts at Castleshaw. By Samuel Andrew, and Major William Lees, V.D., J.P. Second Interim Report, prepared by F. A. Bruton, M.A. With notes on the Pottery by James Curle, F.S.A. 8o. 1911. University Press, Manchester.

Annual Report on Architectural Work in India for the Year 1910–1911. By the Officiating Consulting Architect to the Government of India. Fo. Calcutta, 1911. Superintendent Government Printing, India.



TRINITY COLLEGE, CAMBRIDGE. From Loggan's *Cantabrigia Illustrata*.

f Architectural Library

Peterhouse, Cambridge. From Loggan's *Cantabrigia Illustrata.*

COLLEGIATE ARCHITECTURE.

By Edward Warren, F.S.A. [*F.*].

Read before the Royal Institute of British Architects, Monday, 19th February 1912.

We have grown, in modern times, to connect the words College or Collegiate with an educational purpose, but their ancient and true significance merely denotes a community or communal existence. In the old sense the "Collegium" was a corporation, civil or religious, and in mediæval times usually the latter. You will find the term still applied, especially in the Latin countries, to monasteries, but it signifies strictly speaking the community and not the buildings pertaining to it. In this country, however, we now apply the term to the definite habitation of a community, and, in nine cases out of ten, to an educational one. We still, however, have many old buildings, founded for religious or charitable purposes, and very frequently combining both those intentions, known as colleges. Our ancient almshouses are often so called, though they frequently bear a more appropriate name, which again has grown to have a modern significance foreign to its real one, that of hospitals. It will, I think, generally be found, that where an almshouse bears the name of college, it was originally the home of a religious society which either served also as a guest house or refuge for the destitute, or has been converted to that purpose. Its truer and more appropriate name is Hospital or Hospitium, which word has, of course, no real medical significance. In this Paper I shall ask you to accept the word College in its ancient and more comprehensive sense.

There is no architectural manifestation of English life more individual or more characteristically national than the form of building developed from the communal habitations of religious communities, and now associated chiefly with our old universities and public schools, and in a minor degree only with charitable institutions.

The recognised components of the groups of buildings which form the typical English College are ever the same. The Chapel, the Dining Hall, the Masters' Dwelling, and the dwellings of the inmates of various degrees, with the kitchen and other necessary offices, are the invariable constituents alike of the colleges at one of our old universities, the Inns of Court or of Chancery, the old public schools, or the almshouses. The last are perhaps generally unprovided with a library, while of the three first that is of course an invariable adjunct.

Though the almshouses, under their varying titles, are homes for the aged, and destined as peaceful refuges for their declining years, while the colleges of our universities are homes for the young, and devoted to their education and preparation for a future external life, the difference in inception and original constitution is smaller than at first appears, and the similarity in plan and distribution of parts is often very striking; and I propose to invite your attention, while dealing with the evolution of the English college, to some collateral examples of the almshouse or hospital.

The educational college was, in England, like almost every ancient institution, of very gradual growth. The natural segregation in university towns of scholars in small communities, frequently determined by their place of origin, led to the appointment by each such community of its own officers, and the establishment of halls or hostels under disciplinary rule. The hospitia or hostels thus formed, under the control of a Principal, were the forerunners of the halls, still surviving in name in Trinity Hall, Cambridge, and in name and to some extent in character in St. Edmund's Hall, Oxford. These halls grew in power and wealth, land was given or granted them, and buildings grew up, they either increased in numbers, wealth, and prestige and became colleges, or were absorbed in process of time by deliberately founded and endowed colleges, as at Worcester College, Oxford, where a group of old halls still remains.

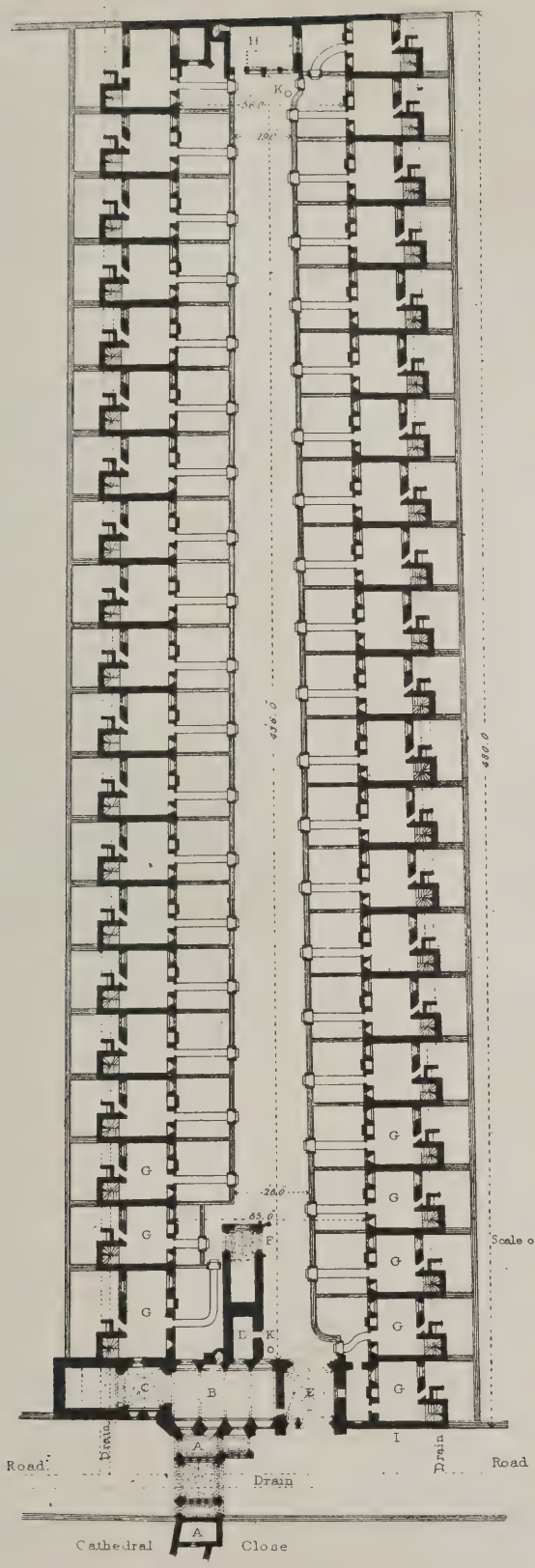
Residential colleges were a feature of most ancient universities. The idea was not of English origin. Colleges had arisen at most of the early universities, in Northern and Southern Europe, as a natural means of supporting students attending the university schools. There were many colleges attached to the University of Paris; and the Sorbonne, still bearing, like Merton College, the name of its founder, was a similar provision of residence and endowment for poor students.

It is a curious and striking fact that it is only in this kingdom and its colonies and offshoots that the residential college attached to a university has been perpetuated. Such colleges upon the Continent are indeed extremely rare; they seem to have died out, and where modern instances exist they are generally founded more or less upon the English model.

The type of plan with which we are all familiar in the colleges of Oxford and Cambridge, at Eton and at Winchester, grew by natural evolution out of the plan of the religious houses, alongside of which they grew up, where indeed they were not, as was sometimes the case, themselves founded primarily as religious establishments.

It will be well then to begin by considering the plans of one or two ecclesiastical colleges in the old sense, before passing to the evolution brought about by the development of educational needs.

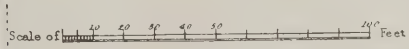
The Vicar's Close at Wells is a singularly interesting instance of a purely residential college, founded for the express purpose of providing lodgings for the chantry priests or vicars choral of the Cathedral. Its statutes date from 1347, and its buildings were put in hand soon afterwards. It provides upon a singularly narrow site 42 distinct little houses for its inmates, each complete with living-room, staircase, and necessarium on the ground floor, and a sleeping-room above, the rooms being in the clear about twenty feet by thirteen feet. Each has a small garden in front and a small backyard. Beautiful and comfortable little dwellings, now used, I believe, for theological students. At the southern or entrance end are



General Ground Plan of the Vicar's Close, Wells, Somersetshire.

From Pugin's *Examples of Gothic Architecture.*

REFERENCES

A Passage to Chapter House over the Road
B Chamber under Hall
C Vaulting under Kitchen
D Dº Dº G^t Staircase
E Entrance from the Road.
F Porch of G^t Staircase.
G G 42 Vicars' dwellings, each consisting of 2 Rooms, a small yard behind & a Garden in front, surrounded by a dwarf wall
H Chapel with Library over.
I Situation of Oriel Window fronting the Road, see plates 5 & 6
K Wells

the dining hall and the porter's lodge. At the northern or inner end, the admirable little chapel with the library over it. The site measures roughly 480 feet by 140 feet at the southern, and 135 at the northern end, and the skilful but, unfortunately, unknown architect arranged the dwellings upon lines inclining inwards from south to north, possibly with the intention, and certainly with the effect, of increasing the apparent length of the northward vista from the entrance; the internal dimensions between the houses being 65 feet at the south and 56 feet at the north, a decrease of 9 feet in the internal length of 430. Anything more charming, of its order, in mediæval architecture, it would be difficult to find. Here we have a complete collegiate court arranged upon an unusually long narrow oblong.

From Wells I propose to turn to Winchester, a name rendered especially famous in collegiate architecture by that great founder of the college systems in England, William of Wykeham, and to invite your consideration of a group of buildings founded and built as an ecclesiastical hospital, or almshouse for the infirm, and, though of considerably earlier foundation, owing much to that great bishop, statesman, and builder.

The hospital of St. Cross, without Winchester, was founded by Henry of Blois, brother of King Stephen, and Bishop of Winchester, upon the site of an old monastery, as a refuge for thirteen pensioners, who were to be "impotent poor men," with a system of daily doles to 100 poor out-pensioners, for whose use a special hall was provided. The hospital came under William of Wykeham's governance in 1372, and, though I believe there is no documentary evidence of rebuilding at his hands, it seems almost impossible, in view of his masterful character and creative instincts, that those hands did not find employment here; there is considerable architectural evidence of synchronous work, and he is known to have repaired the hospital, and amended its disciplinary system. His successor, Cardinal Beaufort, brother of Henry IV., enlarged the charity and the buildings, and appointed that there should be as inmates 2 priests, 35 brethren, and 3 sisters. In 1445 he founded within the precincts an almshouse to be called the "House of Noble Poverty."

The general plan of the existing buildings consists of an outer and an inner court. On the east side of the former is the "hundred mennes" hall, on the west are the kitchen and offices, on the south Cardinal Beaufort's gatehouse, the porter's lodge, and the refectory, the entrance from the road being on the north side.

The great inner court has the Master's lodgings on the north side, the brethren's dwellings occupy the western and half the southern, while the large cruciform chapel with its central tower commandingly occupies the south-east angle, and is connected by a covered cloister-way or ambulatory, along the east side, with the gatehouse buildings. It is all thoroughly collegiate, finely planned and beautiful in detail, and provided, it is hardly necessary to say, with ample gardens. The extreme internal dimensions of the great inner court are about 225 feet north to south, and 153 feet east to west along the north side. This is perhaps the noblest and most interesting of ancient English hospitals, but there are many others of great beauty and interest, such as Ewelme in Oxfordshire, with a grammar school attached to it, Lord Burghley's Bede House and Browne's Hospitals at Stamford, and Bablake's and Ford's at Coventry, St. John's at Northampton, the well-known Bede House at Higham Ferrers, and the Priests' College at Cobham in Kent, all most worthy of description and illustration, as well, literally speaking, as scores of others, of distinctly collegiate type. I propose, however, in this connection, to offer you only one or two further illustrations of these hospitals in due order.

Though many mediæval colleges retain portions of monastic buildings, and some of those deliberately built as colleges copied the monasteries in respect of internal cloisters, they contain no such features as the church, the chapter house, or the common dormitory or "dorter," the last a typical and invariable adjunct of the monastery. There is the further

difference that the college has a series of independent staircases leading direct from the court to the various habitations.

The early halls or colleges appear to have had no chapels, their members doubtless attending external churches. But, as many founders or benefactors required masses to be sung for their souls, by the members of their college, chantries or chapels soon became common, and in later times, indispensable. The typical feature of all ancient colleges is, that direct mediæval heritage of domestic as well as monastic buildings, the claustral plan, the enclosed court or quadrangle; and the typical early college plan is a simple quadrangle entered in the centre of one side, under a gateway tower, and containing the chapel, the Master's lodge, the library, generally on an upper floor, the chambers, the parlour or common

Merton College, Oxford. From Loggan's *Oxonia Illustrata* (1675).

room, the hall opposite the entrance, and the kitchens and offices. The students, innocent of modern luxury, slept three or four in their chambers, or in the roof garrets, the corners or sides of the chambers being screened off as studies. They lived, not indeed under monastic rule, but under a monasticism very slightly tempered.

Both at Oxford and at Cambridge it was in the late thirteenth and early fourteenth centuries that colleges, upon a deliberate and carefully considered plan, both as to buildings and constitution, and intended largely for the maintenance of undergraduate students, were first founded and built.

The earliest of English colleges in the modern sense, Merton College, Oxford, was founded deliberately by Walter de Merton, with all the individual rights of self-government, election of its own members, power to hold property, &c., as a training school for "secular" clergy. The statutes of Merton, the model of subsequent foundations, both in Oxford and Cambridge, date, in their earlier form, from 1264, and in their final form from 1274. The chapel, begun 1294-97 or thereabouts, and completed, with its fine bell tower, in 1450, is unusually large

and magnificent; it serves or served also as the parish church of St. John the Baptist. It was intended to be a complete cruciform church, but the nave was never built, and the transepts became the secular church, and finally the college ante-chapel, forming the much adopted "T"-shaped plan. The hall, which is large, was altered by Wyatt, and has been "restored" into a modern building since his day. The celebrated library occupies the south and west sides of the beautiful little fourteenth-century Mob Quad north of the chapel. The fine "Fellows' Quad" was built about 1608 to 1610, and its front to the meadows is a beautiful example of its style, which is, however, merely the current Oxfordshire domestic building manner turned to college uses.

I show these later buildings as a matter of convenience in dealing with an individual college, but will now revert to the earlier forms.

The foundation and planning of colleges was "in the air" in the fourteenth century, which that excellent authority upon early universities, Mr. Rashdall, calls "the college-founding epoch *par excellence*." He says that, at Paris, sixteen colleges had been founded before 1300, and there were fifty by 1380. At Oxford six colleges had come into existence between 1263 and 1341; at Cambridge seven between about 1300 and 1352. There is therefore nothing extraordinary in the fact of the foundation, in 1379, of a new college at Oxford, by William of Wykeham. As Merton established a model for England in constitution and statutes, so New College set the fashion in plan and manner of buildings, a fashion which widely affected college building through the subsequent centuries.

We find at New College the full acceptance of the quadrangular or claustral plan, and, what is unusual, the inclusion of an actual cloister monastic in type, a cloister pure and simple for air and exercise, or ceremonial processions, leading to nothing but itself and its bell tower. It is the last, I believe, of its kind. It has no chambers around it like all subsequent college cloister courts. The mediæval portion of the college, which is still the nucleus of the whole group, consists of the great quadrangle, entered on the west side under its imposing gate tower, flanked on the right by the ample "lodgings" of the warden, on the left by the porter's lodge. The north side of the quadrangle is occupied by the fine chapel, "T"-shaped in plan like the unfinished chapel of Merton, and the raised dining hall with its steep stone staircase under a cavernous arch.

On the east are the library and chambers, on the south again chambers. The cloister lies to the north-west, with its admirably simple unbuttressed bell tower on its north side. Eastward lie the gardens, of which the formal outlay and the Mount, called Parnassus, erected 1529-30, and found so useful to Charles I.'s gunners, are clearly shown in Loggan's view, with the old city walls that enclose them not indeed quite correctly shown.

The upper story, which was added late in the seventeenth century with such lamentable detriment, as I think, to the proportions of the front quad, and to the relative scale and dignity of the chapel, does not appear in Loggan's view, drawn about 1675, and the back quadrangle was added in 1684, and appears in Mr. E. H. New's excellent modern bird's-eye view, adroitly expanding towards the gardens. New College, conspicuous in rare beauty and charm, is of extreme importance as the most complete surviving example of a deliberately planned mediæval college, in the educational sense, attached to a university. It is the architectural expression of its founder's ideal, and as such, no less important sociologically than as architecturally. It became largely the model for subsequent college building both at Oxford and at Cambridge. It has constantly grown, and especially so in quite recent days. To Sir Gilbert Scott and Mr. Basil Champneys are due the long Holywell range to the north.

No notice of New College can be in any sense complete without reference to Winchester. William of Wykeham, Bishop of Winchester, Chancellor of England, Lord Privy Seal, and Surveyor of Edward III.'s buildings, has no greater claim upon the admiration of posterity

than as the founder of colleges and instigator of the collegiate system in England. His foundation of New College was intended as the completion of a dual scheme, and in that intention his college of St. Mary de Winton at Winchester was to be the preparatory school, for young boys who were to be passed on to his New College of St. Mary de Winton at Oxford, with a view to providing well educated and trained recruits for the secular priesthood, the ranks of which had been greatly thinned by the Black Death. His well-known motto "Manners Makyth Man" is significant of the type of intended training.

The building of Winchester School seems to have been begun in 1387, and Loggan's view [p. 273] shows at once the striking similarity in type, detail, and actual arrangement

New College, Oxford. From Loggan's *Oxonia Illustrata* (1675).

between it and New College. The school is entered in the same way beneath a gate tower, and again you have, but in a second quadrangle, the chapel and hall in a continuous range. The building materials of course are different. Knapped flint facing, in the local manner, replaces the Oxford ashlar to a great extent, though ashlar of chalk and river-borne stone from a distance occurs on the more important buildings like the chapel. As at New, the claustral plan is fully accepted, and there is a small actual cloister very similar in detail to that at Oxford, but almost filled by a beautiful chantry chapel. It is indeed probable that some of the same masons moved from Oxford to Winchester.

Winchester leads one by natural sequence to another great Oxford College, the rival in beauty and interest, as in so many other things, of New College—and, like its elder, founded and fostered by a bishop, William of Winchester, not of Wykeham but of Waynflete.

The college of St. Mary Magdalen [p. 274], "the most noble and rich structure in the learned world," says Antony à Wood, was built without the city walls upon the west bank of the Cherwell, and upon the site of the ancient hospital of St. John, some portion of whose buildings it incorporates. It is not therefore quite so homogeneous as New, nor is its plan quite so unrestricted, but its main disposition was not seriously affected by the inclusion of old buildings, and, apart from its intrinsic beauties, it is extremely interesting as showing an important step in the evolution of the claustral plan.

Founded by William Patten, better known as William of Waynflete, in 1458, the original college consists of an oblong cloister court, whose internal dimensions are about 150 by 110 feet, placed with its angles very nearly to the cardinal points, entered on the north-west side by a fine gateway under the splendid Founder's Tower, or in common use by a smaller one under the Muniment Tower, its "T"-shaped chapel and its dining-hall forming, in a continuous range, as at New College, the south-west side, with Common room and offices beneath the raised hall; chambers, built behind and over the cloister walk, occupy the north-east and south-east sides; the Library, the Founder's and the Muniment Towers, with the State rooms pertaining to the President's lodgings, form the north-west side, and the lodgings themselves about at right angles to the external face of this side.

There are few remains of the Hospital of St. John, but St. John's Quadrangle, which is the first court of entry, and almost entirely rebuilt, commemorates the name, and contains fragments of the earlier structure, amongst them the "Pilgrims'" gate, now blocked, on the High Street front, and said to have been used for doles to pilgrims. The irregular court to the east of this, and known as Chaplain's Quadrangle, probably also incorporates portions of the earlier walls. The Great Tower, the prime glory of Magdalen, and built apart from the chapel as at New, was obviously built as a completely detached tower, since its base mouldings exist within the later buildings. It was begun in 1492, but was not ready for its bells till 1505. The master mason was one Raynold or Raynolds, and it was supervised by two Fellows, Richard Gosmore and Thomas Prutt. St. John's Quad is the first instance of an open sided entrance court, that I know of.

The new buildings of 1735, a fine, plain, well-planned and well-proportioned structure, northward of and parallel to the north-east side of the cloister, contains excellent oak staircases, and admirably panelled rooms. The ground floor chambers are recessed on the south side and protected by an arcade, in the obvious and sensible Italianate manner, so as to provide a covered terrace of communication between the staircases. The design, according to college records, was the work of a member and former Demy of the college, Mr. Edward Houldsworth, who desired to demolish the greater part of the cloisters, and to build a great quadrangle, linking up the chapel hall and Great Tower.

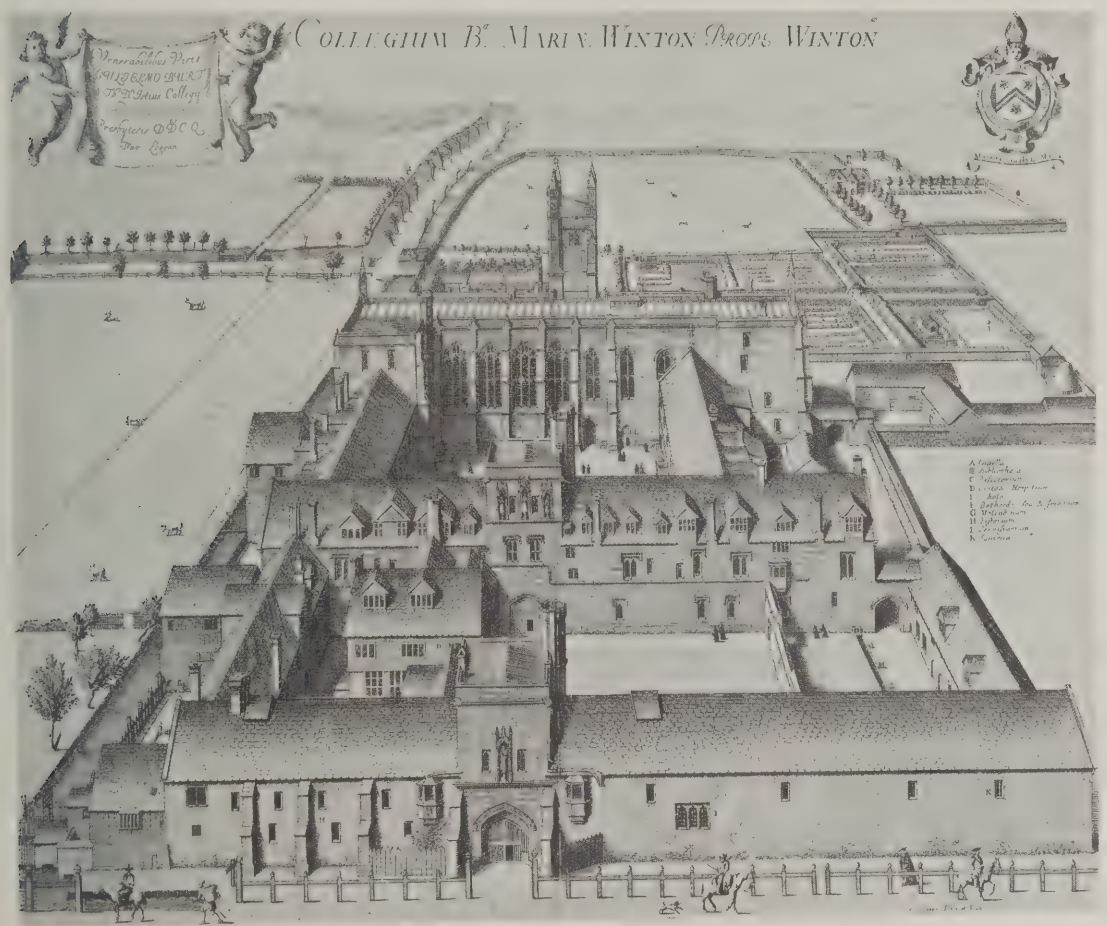
I have dealt with Merton, New, and Magdalen at some length, of set purpose, not only because they are the three most conspicuous mediæval colleges, but because they furnish three distinct links in the chain of college evolution, both academically and architecturally speaking. Thirteenth-century Merton is the early model of college constitution, and architecturally a carefully planned college. Fourteenth-century New, both in extension of system, symmetry, and scale, surpassed Merton. Fifteenth-century Magdalen improved upon New in many details of system, and, in the adaptation of arcaded cloisters to practical uses, in its greater compactness, and in the less monastic disposition of its buildings, marked a further step in collegiate education and architecture.

At Cambridge there were earlier colleges than New, and many earlier than Magdalen, such as Peterhouse, 1284; Clare, 1326; Pembroke, 1343; Trinity Hall, 1350; Corpus Christi, 1351; Gonville and Caius, 1348; and King's, 1441.

Peternouse has lost its thirteenth-century aspect, though some of the original fabric

remains, now marked by later facings. The principal court, with the hall on the south side, was not completed as a quadrangle till near the middle of the fifteenth century. The existing and much later arrangement at Peterhouse, of the arcaded screens joining the chapel with the sides of the court, is of special interest.

Clare College has little or nothing to show of its fourteenth-century foundation. It took quadrangular form early in its career, but on a small scale. It was much rebuilt after a fire in 1521, and in 1638 the new quadrangle was begun, Thomas Grumball being master mason or architect, and John Westley builder. Grumball designed the well-known bridge in 1640.



WINCHESTER COLLEGE. From Loggan's *Oxonia Illustrata* (1675).

The Civil Wars stopped the work, and some of the materials are said to have gone to strengthen the castle walls. The work seems to have begun again with the Restoration, and to have proceeded between 1662 and 1715, Robert Grumbold being the architect. The present chapel was begun in 1763, the old one being then pulled down. Sir James Burrough was its architect, succeeded, after his death in 1764, by James Essex. This college shows a fairly full acceptance of the Renaissance in Charles I.'s reign, and a very complete assimilation of Palladian ideas in the fine river front.

At Pembroke College there is still something of the mediæval-century college to be seen. The hall was restored or rebuilt in 1452, and in 1633 a large part of the second court was

begun, comprising the north and a large part of the south sides. Sir Christopher Wren's chapel, extremely interesting as the somewhat naïve and inexperienced early work of that great architect, was consecrated by his uncle, Bishop Wren, in 1664. It was joined up with the old court by a new range of buildings in 1666. The old chapel was turned into a library in 1690. Between 1712 and 1717 the Trumpington Street front and the gatehouse were faced with stone ashlar.

Corpus Christi began with a complete quadrangular plan, the earliest at Cambridge, and must have been a dignified and interesting college. Its front court was, however, practically rebuilt between 1823 and 1827, in the Gothic taste of that period, by William Wilkins. The delightful little back court still exists. At Jesus College, where pre-existing conventual

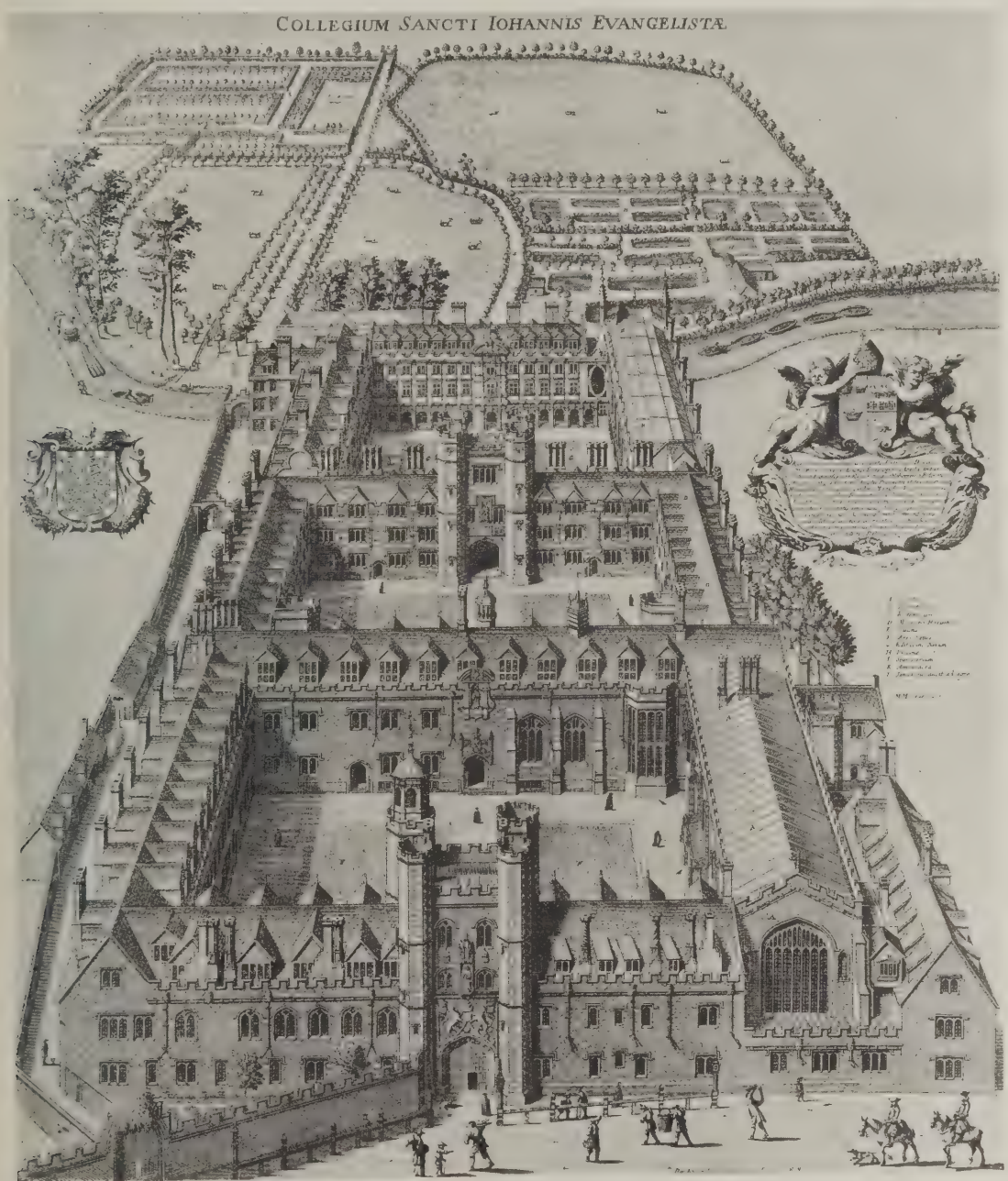
Magdalen College, Oxford. From Loggan's *Oxonia Illustrata* (1675).

buildings were absorbed, the inner remodelled cloister court is entered from an outer court, and leads to the beautiful old convent chapel.

The normal college plan at Cambridge is seen in Queens', 1448, Christ's, 1505, and St. John's, 1508. In all of these the chapel, hall, kitchen offices, parlours, master's lodge, library and chambers were ranged round a quadrangle with a gate-tower opposite the hall. The magnificence of St. John's towers is characteristic of the Gothic college work at Cambridge, greatly surpassing Oxford in that particular feature.

None of these colleges, with the exception of King's, were at first as magnificently ordained as New or Magdalen. King's College was deliberately planned in accordance with the explicit directions of Henry VI.'s will, and the splendid chapel, the most sumptuous of its kind existing, remains as an example of royal intentions. The King himself laid its foundation stone in 1446. "King's," however, if we disregard its beautiful Renaissance buildings,

is a magnificent chapel with a college, and an almost exactly coeval building owing its origin to the same royal source, and its plan and arrangements to the same testamentary disposition as Eton College, whose chapel, though much less sumptuous, greatly recalls that of "King's."



ST. JOHN'S COLLEGE, CAMBRIDGE. From Loggan's *Cantabrigia Illustrata.*

Eton was designed to be contributory to King's as a preparatory school, precisely as Winchester was to New College, Oxford, Wykeham's scheme being closely copied.

The original buildings of Eton show a college of precisely the same type as its Oxford

and Cambridge contemporaries. Its plan is claustral, with two enclosed courts, one, the further, arcaded, a large chapel occupying the whole of one side of the first court, and the hall a similar position in the second. Being situate in a brickmaking neighbourhood with no local stone, it was largely built in brick, with delightful effect, stone, except for the chapel, being sparingly used.

The almshouses or hospitals, to which I have referred before, followed similar lines of development to educational colleges, and in both, the type of college plan having been firmly established and still adhering very generally to the claustral plan, hospitals and colleges continued, and, to a large extent, still continue, to follow the arrangement of enclosed courts.

As we have seen, that acceptance was evolved from the ordinary monastic plan, which was also the accepted domestic plan of coeval building, and may be found in houses of any

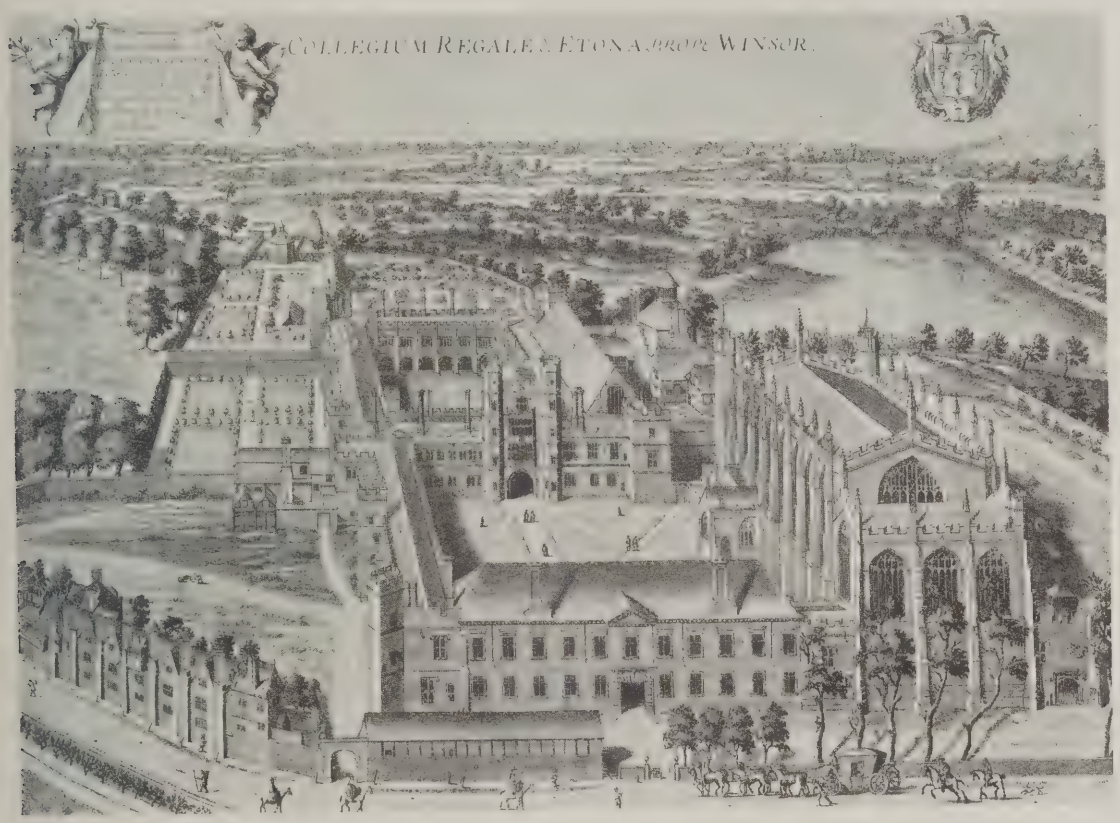
King's College, Cambridge. From Loggan's *Cantabrigia Illustrata.*

size or dignity built up to the seventeenth century and even later, and, as long as the height of the enclosing buildings is small, or the internal dimensions of the court are relatively large, it is an excellent and, architecturally speaking, most satisfactory plan. But as the height of the surrounding buildings grew with the need of increased accommodation, and space for adequately large quadrangles became in crowded sites more difficult of acquisition, it began, of course, to show demerits in its exclusion of sunshine and of free air currents.

The mediæval idea, partly traditional doubtless, and partly instinctive, was all for seclusion and inclusion, the absolute shutting-out of the world, freedom from gusts and draughts, shelter from moral or actual storms. This idea lingered on the Continent longer than in England; the "cour" of France was a feature of every moderate-sized town house till the end of the eighteenth century; the "cortile" of Italy, and the "patio" of Spain were at least as long-lived, and in the collegiate buildings of all these countries the claustral

plan obtained and still obtains, accompanied in Italy and Spain, almost invariably, by arcaded ground stories, as a shelter against the power of the sun.

In England, however, probably owing partly to our greater security from invasion or internal strife, partly to our milder climate, and partly to our more practical instincts, it began, early in the sixteenth century, to be perceived that, while a quadrangle was architecturally dignified, scholastic, and delightful, its comfort and seclusion were somewhat too dearly bought by the exclusion of the southern aspect. The sun in England is seldom an enemy to exclude; he is a friend whose infrequent visits should be welcomed. So the practice began of leaving out the fourth or southern side to the quadrangle, or merely replacing the



ETON COLLEGE. From Loggan's *Cantabrigia Illustrata.*

buildings by a relatively low screen wall. Dr. John Caius, a native of Norwich, who refounded Gonville Hall, of which he was a member, as the College of Gonville and Caius [p. 279], has the credit of being the first to make this innovation, though, as we have seen in Loggan's view of Magdalen [p. 274], that college had a front quadrangle open to the west.

Caius had studied and lectured at Padua, and practised in London. He was a man of science, and also a man of ideas, not to say of fads and fancies. He had his own hygienic notions, in pursuance of which, in building the new court of his recreated college in 1565, he bounded it on the south side with a mere low wall, the central and most interesting feature of which is the celebrated Gate of Honour, which faces the schools, and is the final and symbolic exit in the sequence of three symbolic portals—Humility, Virtue, and Honour. Delighting in symbolism and ceremonial, standing out for ancient forms and customs in

face of the rising tide of Puritanism, he dedicated, at 4 A.M. in the morning on 5th May 1565, his new buildings to Wisdom, and laid the foundation stone in the name of the Trinity for the furtherance of virtue and letters. He died in 1573, before their completion.

The pride of Cambridge, the largest, and in many ways the finest, college at either of the old universities, is, of course, Trinity College. It is not, however, a homogeneous and deliberately planned college. Trinity swallowed up two colleges and several hostels, parts of which it converted or rebuilt, and other parts of which remain. Michaelhouse second, and King's Hall fourth of Cambridge foundations, were both merged in Trinity, which was founded by Henry VIII. in 1546, for a master and sixty fellows and scholars. King Edward's gateway, rebuilt in 1601, at the west end of the chapel, was formerly the entrance of King's Hall.

The graceful and charming fountain, built in 1602, was rebuilt in 1716. Ralph Symons was the master mason or architect of the early seventeenth-century work at Trinity, as of the second court at St. John's, in the library of which college some of his drawings are preserved. He entered into a contract, together with Gilbert Wigge, and lost one of his hands during the progress of the works. The brick building at Emmanuel College, begun in 1632-3 by John Westley, bricklayer, and Henry Man, carpenter, was finished in 1634, and still remains practically unaltered but for its dormer windows. Amongst the many emigrants who, about this time, or a little before it, left Cambridge for the Colonies in America was John Harvard of Emmanuel, who in 1637 began his ministry at Charlestown, and who in 1638 bequeathed half his estate and his library to the college which bears his name and has expanded into the famous university of Harvard, at Cambridge, Massachusetts. There is an interest at once touching and inspiring in this transplantation by a Puritan son of Cambridge, to a distant Puritan colony, of the collegiate ideals, and even, in a humble and pathetic way, of the architectural semblance of his Alma Mater, and the homely brick buildings of Harvard may well have been inspired by the brick buildings of Emmanuel and other Cambridge colleges. Here again we have the fourth or front side of the court left open.

This plan of the open-fronted "quadrangle" grew in favour both at Oxford and Cambridge; and though many colleges, out of conservatism or desire for the utmost amount of housing room, still stuck to the ancient plan of complete enclosure, a great many adopted Caius' plan, and by the end of the seventeenth century it had become quite common. We find it in Oxford at New College in the seventeenth-century buildings towards the gardens, at Trinity, at Queen's, at Worcester, and in some of the later quadrangles at Christ Church and All Souls', an open screen or railing taking the place of the wall in the last.

At Cambridge Sidney Sussex adopted it in the late sixteenth century, and St. Catherine's deliberately opened out its front court to Trumpington Street by pulling down the intervening buildings and substituting a screen railing in 1757. Conservatism, the requirements of space, or the desire for a very satisfactory architectural form, however, generally maintained the inner courts at both universities as complete enclosures. Always an imposing arrangement, the enclosed court has held its own in all countries, under all climates, and in all ages. If it is typically Assyrian, Greek, Roman, and Moorish, it has become as typically Spanish, Italian, and French, and we have seen that it is English. It is so obvious and general a treatment that it is by no means essentially collegiate, though commoner here, perhaps, in colleges than elsewhere. Nearly all our great public buildings have internal quadrangles. Inigo Jones's frustrated scheme for Whitehall Palace consisted of a series of courts, though they were not all to be quadrangles. The squares of London, Bath, Bristol, and so many other British and Continental cities, are but a large civic development of this obviously convenient and impressive plan.

Where, however, it was desired, for reasons economical or other, to have the effect of the completely enclosed quadrangle, some colleges, and notably Peterhouse, raised their buildings

on open colonnades or arcades so as to obtain that free air passage or perflation which we now so much value.

This is an excellent and architecturally effective plan. The door of Peterhouse chapel bears the date 1632. At both the old universities as elsewhere, the seventeenth century was a busy time of building. A great deal was done at Cambridge, and at Oxford the days of King James I. saw the building of Wadham College, which is the most complete, homogeneous, and unaltered college at either university. Founded by Nicholas and Dorothy Wadham, good West-country gentlefolks, in 1609, it was deliberately planned on well-accepted mediæval lines, and carried out with such conservatism of form and detail that, at first glance, it looks at least fifty years older than it is. The building began in 1610, and

Gonville and Caius College, Cambridge. From Loggan's *Cantabrigia Illustrata.*

West-country masons were sent for to carry out the stonework. Teams of oxen were also sent up from Somerset for the haulage. Mr. T. G. Jackson, in his most interesting book upon this college, of which he is a Fellow, states his clear opinion that a certain William Arnoll or Arnold, who is described as the head workman, and was paid £1 per week, was the actual architect.

The plan is simple, direct, and traditional; a large single quadrangle is entered on its west side by a central gate tower, which is faced by the continuous range of chapel and hall. The Warden's lodging is on the left-hand or north side, the remainder of that side and all the south range contain chambers. The chapel has the usual "T"-shaped plan, its chancel projecting eastward at right angles to the east range, and balancing the kitchen wing which projects in similar fashion from the hall portion of that range; a cloister passage connects these wings. This seems an admirable arrangement, the "T" plan of the chapel permitting

it to have the necessary orientation, while maintaining, by means of the ante-chapel, the continuous range with the hall.

The general character is Gothic, the chapel, with its traceried windows, especially so; but details of a pseudo-classic character, in the well-known Oxonian manner, abound. The gardens, still beautiful and charming, have lost their delightful old formal outlay, and the screen wall on the entrance front has given way to a mean little fence. With the exception of the hybrid and elaborate four-storied frame or screen of superposed orders of columns to the hall doorway, which bears the statues of founder and foundress and their arms, and accentuates the centre of the east range, the whole exterior of the college is restrained and dignified, well planned and well proportioned. It is said to have cost £11,360. To architects Wadham makes a special appeal as the college of Christopher Wren, and to all Englishmen as that of Admiral Blake.

The seventeenth century was no less prolific in almshouses than in colleges of learning. Sackville College at East Grinstead, built a few years after Wadham, is a good example. It was founded about 1616, for twenty-one men and ten women, by Robert Sackville, Earl of Dorset. The view shows the chapel and the eastern side of the court—a pleasant, low-ranged building, faced with rough-dressed ashlar, and of thorough collegiate character. It is associated with the name of John Mason Neale, priest, scholar, translator, and architectural enthusiast, who during many years unsparingly spent himself in its rehabilitation.

One of the stateliest of English almshouses is the Abbot Hospital at Guildford. This has a great gate tower with four octagonal angle turrets, in the manner of a Cambridge college, though its founder was an Oxford man. It has a fine quadrangle, and the handsome brethren's dining-hall, the fine staircase, the panelled corridors, and splendid doors all testify to the munificence of its founder, Archbishop George Abbot, sometime Master of University College, Oxford. It was begun in 1619, and incorporated by Charter as a hospital for a master, twelve brethren, and eight sisters. Complete with chapel, hall, stained glass, heraldry, and everything handsome about it, it is a typical college in disposition and detail, and its fine warm brickwork is delightful in colour.

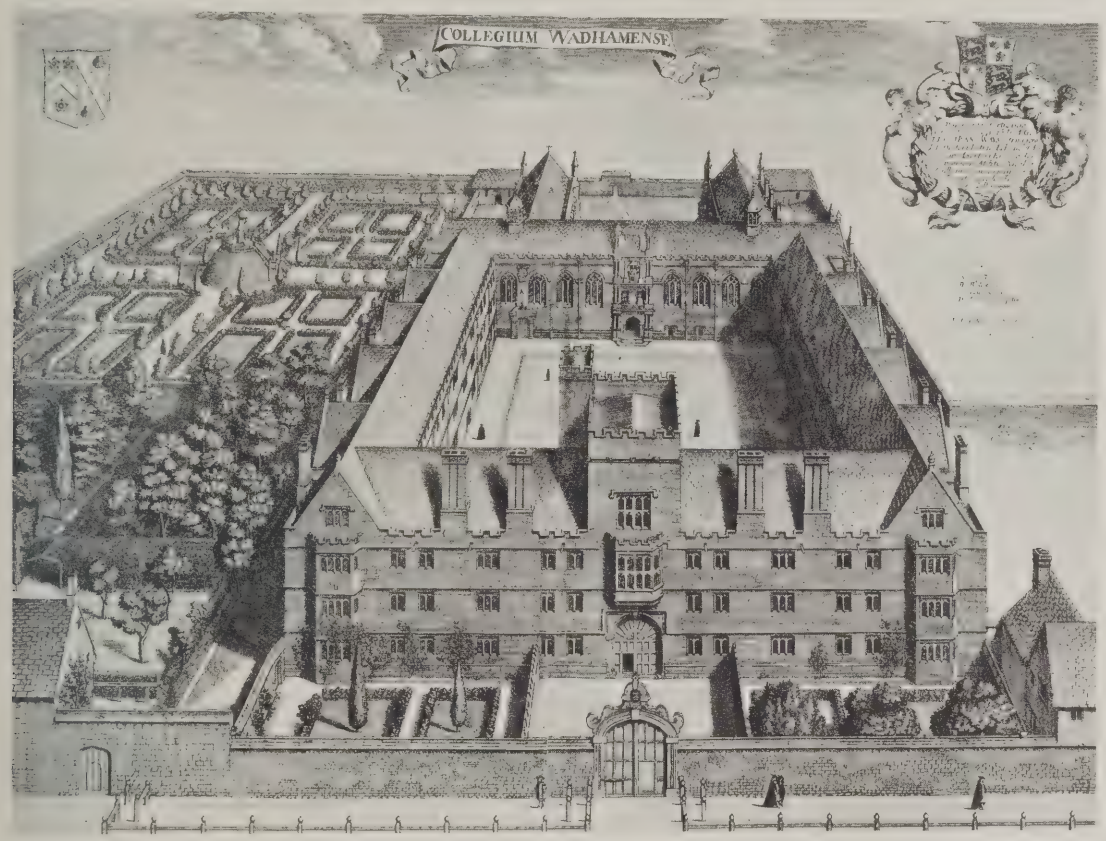
While dealing with seventeenth-century brick collegiate buildings, it may be interesting to skip for a moment across the North Sea, and consider one of the three simple little residential colleges which exist in Copenhagen—the Regensen College, founded, for poor students of the University, about 1610. A quiet, unostentatious, little building, in small, dull-coloured bricks, reminding one again somewhat of Cambridge, this establishment, one of three in Copenhagen, is a rare instance of a surviving residential college on the Continent. It is solely residential. There are no lecture-rooms and no lectures, merely living-rooms, and very modest accommodation for meals.

Clare College, Cambridge, a mediæval foundation, was, as we have noted, rebuilt in the seventeenth and eighteenth centuries, and stands now as a fully fledged Renaissance type.

Contemporary with Wadham at Oxford is the Fellows' Quadrangle at Merton, before alluded to, and closely following the front quadrangle at University College, begun in 1634, but not finished till 1674. The smaller quadrangle was completed about 1719, but, with true Oxonian architectural conservatism, preserved the Jacobean manner. In 1637 the well-known porch of St. Mary's was built, in 1640 the wonderful staircase at Christ Church, and in 1656 came Brasenose Chapel. At St. John's, Oxford, the fine second quad, with the incomparable garden front, was finished under Laud between 1631 and 1635. These are persistently attributed to Inigo Jones, without, as far as I know, any definite warrant. They are quite unlike his known work. At Cambridge, Peterhouse Chapel and screen, 1632-3, the brick building at Emmanuel, 1632-4, and the charming building known as the Pepysian Library at Magdalen, which seems to have been begun between 1670 and 1680, all attest to the vigorous

collegiate instincts of this eventful century. The early eighteenth century was hardly less vigorous at both universities, and the period between 1660 and 1730 left us some of the finest individual collegiate buildings that we possess, and, if we include under that term all university buildings, the list, comprising the Radcliffe Camera and Ashmolean Museum at Oxford, and the Senate House and University Library at Cambridge, becomes magnificent.

Oxford possesses in Queen's the finest and most interesting example of an early eighteenth-century college (for such it may be considered, though its inception and parts of its construction date from the late seventeenth), a college, moreover, that has the distinction of actual work by Wren, and much by his pupil Hawkesmoor. An ancient college, of mediæval founda-



Wadham College, Oxford. From Loggan's *Cantabrigia Illustrata.*

tion, it was entirely rebuilt between the reigns of Charles II. and George II., and its front changed from Queen's Lane to the High Street. The oldest portion is the east side of the back quad; facing this, and completing the quadrangle, is the splendid library.

The hall was begun in 1713, and forms, as in so many of the mediæval colleges, a continuous range with the chapel. It is extremely difficult to apportion with certainty the work of master and pupil, but the hall and chapel were undoubtedly designed by Wren, who spoke of this design as one of his best works; apart from this statement, the admirable proportions, the fine broad treatment, and refined and scholarly detail of the whole, show the master hand. Dr. Magrath, Provost of the College, has written as follows:—

"The earliest date connected with the present buildings is 1682, which appears in a chronological list of the works of Sir Christopher Wren, drawn up in Latin by one of his sons,

as the date at which '*Capellam collegii Regin. apud Oxon. extruxit.*' Tradition has, however, always assigned the design of the new college to Hawkesmoor, who had already, by 1682, become Wren's 'scholar and domestic clerk.' Wren's contribution to the work may be embodied in a print by Burghers representing an approximation to the present façade of the hall and chapel, but with a fine iron gate closing the chapel passage, which has no muniment room over it, the columns and pediment brought forward so as to form a regular portico, and a very fine lantern in place of the present clock tower. The college seems to have had before it several designs, which have been preserved, but without any indication of date or of the name of the architect. They all contemplated dealing with the whole space occupied by the present quadrangles, and had all the boldness and variety of the Palladian architects. One filled the whole space between the two quadrangles with an enormous elliptical chapel, which would have added another towering dome to the spires of Oxford."

The library, which separates the Fellows' Garden from the back quadrangle, is attributed with confidence to Wren, and it seems more than probable that the general inception of the designs for the reconstruction of the college came from the master, working in intimate collaboration with the pupil, who subsequently carried out most of the buildings.

Wren's immense architectural activities in London, at Hampton Court, Greenwich, Oxford, Cambridge, Winchester, and elsewhere, combined with his scientific work and studies, probably rendered it impossible for him to follow, in detail and actual supervision, a good many of the buildings that owe their form and character to his wonderful genius.

The completion of the front quadrangle with the street front and screen, and the picturesquely unconstructional cupola, are clearly Hawkesmoor's work, but it is probable that Wren had some say in the fine planning of the quadrangle, with its three open cloistered sides, affording covered communication with all its buildings. This front quad, which adopts Dr. Caius' arrangement of the open southern side, with a central gateway, is, I think, in plan and proportion, a model collegiate court.

A record of Wren's collegiate or academic work alone, and it was a small part of the total, is sufficiently imposing. At Oxford his earliest work seems to have been Trinity College Chapel 1667, followed closely by the Sheldonian Theatre 1669. The Ashmolean Museum about 1680, and the belfry at Christ Church known as "Tom Tower" finished in 1682 and designed in the Gothic manner, and, as I think, the most completely satisfying of his essays in that style, show a balance, a harmony, and an adaptability that witness to his amazing fertility.

At Trinity College, Oxford, the north wing of the garden quadrangle, 1665, is attributed to Wren, who built the chapel in 1667, T. Strong being the master mason. It contains magnificent cedar-wood carvings by Grinling Gibbons.

At Cambridge the chapels of Pembroke and Emmanuel, and the superb library of Trinity College, swell the list. The last, built of brick faced with ashlar, was begun 1675-76 (Wren's original proposition having been a circular building with a dome), and forms the west side of Neville's Court, which lies between the great court and the "backs." facing the dining-hall. It somewhat recalls Sansovino's library at Venice. Wren here placed the lower side of the library floor at the springing level of his arcade, probably in order to get full height internally for the tall bookcases, and the window range above, without dwarfing the quadrangle by a lofty building, and also to keep his horizontal lines in some conformity with those of the colonnaded sides of the court. The spandrels are filled with corniced panels and carving.

In 1672 Wren had designed the new buildings for Christ's Hospital, better known as the Blue Coat School, in the City of London—a broadly treated, simple, and beautiful building, which merits more notice than I can spare for it.

The bookcases ranged in the accepted and most practical collegiate manner, with fine

carved gates to the end bays, are of oak reddened to look, it is supposed, like cedar. Grinling Gibbons was responsible for the lime-wood ornaments of the bookcases, and the plaster busts above them. Cornelius Austin, a Cambridge master-carpenter, carried out the cases and woodwork generally.

It is confidently asserted at All Souls' that the fine screen in the beautiful little chapel is by Christopher Wren, sometime Fellow of that college.

Morden College, Blackheath, 1695, is generally ascribed to Wren, but Messrs. Belcher and Macartney ascribe it rather to Nicholas Strong, the mason so much employed by Wren. It is probable that Wren largely inspired and supervised the designs. Through his direct design and supervision, through his personal influence and advice, and still more largely through the training and talent of his pupils and successors, of the "School" that he unconsciously founded, Wren's influence upon collegiate architecture was greater than that of any architect, probably of any individual since William of Wykeham. At Oxford, Hawkesmoor directly carried on his unfinished designs, and was responsible for the strange pseudo-Gothic work in the large cloistered open-fronted quadrangle fronting St. Catherine Street, at All Souls', with the attenuated twin towers, and the handsome iron screen and gates. It redounds to the honour of Nicholas Hawkesmoor that he withstood, against his own interests, the intention of that society to rebuild the beautiful mediæval portions of their college, and rebuked, in a letter to the Fellows, their desire of "erecting new, fantastical, perishable trash." But his designs for the rebuilding of Brasenose give one pause.

To a greater, more inspired, and more scholarly architect, James Gibbs, who may be considered as one of the direct heirs to the Wrennian or English Palladian tradition, and who studied under Fontana in Rome, Oxford owes the magnificent design of the Radcliffe Camera, and Cambridge those of the splendid Senate House, and the beautiful Fellows' building at King's 1723. The latter was a part only of Gibbs's plan, and forms the west range of the existing court. It is a fine detached Portland-stone-faced building of three floors—its centre emphasised by a slight break with pedimented gable and great arched doorway. Four smaller doorways admit to as many staircases. The roof is hidden behind the balustered parapet—the whole handsome and scholastic and dignified. Gibbs, in this instance, actually superseded Hawkesmoor, whose more ambitious and expensive plan, 1712-13, included a large quadrangle, a cloister court, and a bell tower.

The long and beautiful series of collegiate buildings of this country, of which I have been able to offer to your notice only a very restricted number, sufficiently shows that if England has merited anything of the reproach that she has not cared for scholarship, she has abundantly shown that she has cared, as no other country has done, for the scholar. She has paid to Learning the appropriate respect of housing her beautifully, investing her with every handsome and alluring appanage, and for her devotees she has provided fitting homes and an atmosphere of scholastic but unaustere domesticity which is peculiarly English.

The ancient almshouses or hospitals are, like the colleges, not of English origin, but, like the latter, have survived here, while they have largely died out abroad, and have become typically English institutions. They offer an early and most attractive form of the Old Age Pension, and one which, while bestowing comfort upon the pensioners, bestows delight upon the passer-by, who, even when a taxpayer, has nothing to grumble at.

I do not propose to trouble you with more than a few suggestions as to the details of college planning, the more especially as admirable and highly practical papers were read upon that subject before this society, by such admitted experts as Mr. Basil Champneys, in February 1903, and by the Rev. J. B. Lock, Bursar of Gonville and Caius, in May 1904. But, having had some little experience of my own in that line, I will offer you a few personal observations.

I speak entirely of residential colleges, embodying the accepted ancient features of chapel, hall, kitchen and offices, master's dwelling, common room and fellows' and undergraduates' rooms, as well as the modern requirements of lecture rooms and bursaries, and those concessions to modern habits and ideas, the Common-room-smoking-room, the junior common-room, and last, and most recent, bathrooms. If you adopt the quadrangular plan, and I think that you cannot, generally speaking, do better on all accounts, you will be wise, unless the ground and other circumstances permit of large courts with low surrounding buildings, to remember Dr. Caius and the open front to the south, or else to have open corners which can be bridged by arches, to admit of air currents, or "perspiration" to use Dr. Caius' own term. Such open corners can be easily and effectively managed if you adopt the cloister ground plans with arcade or colonnade, and this in itself is a practical and architecturally admirable arrangement, used with conspicuous success by Sir Aston Webb and Mr. Ingress Bell, at Christ's Hospital.

Or you can perhaps find useful suggestions in the double screened or pierced ground story of Peterhouse. I am assuming that you adhere to the healthy and invigorating system of passage ways open to the air.

As the plan of repeated staircases, with their dependent groups of rooms on each successive floor, still finds, and is likely still to find, favour in colleges, it may be well for a moment to consider some of its possibilities, and, to that end, I show you a plan of Brasenose College, in which you will see the arrangement of the old chambers, and Mr. T. G. Jackson's disposition of the new. But if you arcade your ground floor, you must of course narrow the depth on that floor available for rooms, and will probably find that lecture rooms, bursaries, single rooms for non-resident tutors, or single sets can best be placed there. Mr. Lock has pointed out that the arrangement of two sets in depth with the dividing wall has two disadvantages, (1) you lose the opportunity of free air passage, or perflation, so easily obtainable if you have single sets of sitting or "keeping" room and bedroom, in the depth, by means of the usual communicating doors; (2) both bed and sitting rooms must have the same aspect. There is a further disadvantage, which is that as your span increases your roof is apt to grow higher, and it is generally desirable to keep it down. If bathrooms are supplied and with a sufficient number of baths, the bedrooms can be very small, say about 100 square feet, or even slightly less, but of course a comfortable bed space, not facing the light, should be provided. Bathrooms are very generally placed in the basement, and this where the ground floor is raised a little, so that window heads can be brought slightly above ground, does very well, provided that the necessary areas for light and ventilation can be outside the quadrangle, *i.e.* at the back of the ranges, and wide enough, and that smaller areas or fresh air inlets are provided in the quad, so as to give a cross current. The baths are generally arranged in cubicles some seven feet by five, with partitions six feet high or thereabouts, and raised well off the floors, in the ratio of a bath to four or five men, and about half the number of shower-baths. A service room for keeping and drying towels, and a general dressing-room, or two, for muddy youths fresh from "Rugger" or "Socker," is most advisable, with a supply of lockers for flannels, &c. If you have a bathroom and consequent bath boiler, somewhere in the basement, a hot water supply to each pantry can be arranged. The Fellows' rooms are usually now in sets of three, a large sitting or tutorial room, a smaller sitting room and a bedroom, and should have an "oak." College bursaries are merely offices for college business, and should be conveniently placed near the entrance. There must be at least two good well-lit rooms, the bursars' and bursary clerks', and a strong room and lavatory. Frequently more rooms are needed, a senior and a junior bursar's rooms, and a college office or meeting room.

The master's dwelling has grown from the few rooms formerly allotted to celibate masters, and are now complete domestic dwellings for married men, much like a good rectory house

in requirements, but with one special need, a really large study or library, with an ante-room leading to it. The dining-room should also be a large room.

The common room has expanded from the ancient parlour or solar, into a group of rooms constituting the Fellows' private club, and having a large and comfortable sitting-room, where dessert, wine, and coffee are taken after dinner in hall, and where luncheons are generally served. Attached to, or near, this is the now invariable smoking-room, and it is not infrequent to have a third and smaller room for writing, &c. The junior common room is the undergraduates' club, and usually consists of one large room, where breakfast and frequently luncheon also, is served. It is useful to provide a second room for reading, writing, &c., and for both senior and junior common-room groups a distinct lavatory is

Mansfield College, Oxford. (Mr. Basil Champneys, Architect.)

advisable. There is a new refinement of the common-room group which I have just been called upon to supply at Oxford—that is a common-room dining-room, with an ante- or drawing-room leading to it, and a cloak-room and lavatory. This is for the private or collective hospitalities of members of common-room, and completes the club. I have not yet heard of a demand for billiard-rooms at the universities, but have met with that requirement in the master's common-room of a large public school.

Residential colleges for women are multiplying and extending, and growing in architectural importance and beauty. Women are happily coming into their long-denied rights in that regard. These naturally require somewhat different arrangements, the general system being more domestic, and open-air passages and basement bathrooms, &c., being avoided. Large bed-sitting-rooms usually take the place of the masculine double set, but parlours and music and recreation-rooms are provided. Otherwise the recognised

collegiate requirements apply, the chapel, hall, and library being just as essential, or even more so, than for the other sex. Bursaries, perhaps, are not so formal, and Common-rooms have a rather different character, being, for one thing, connected more with tea than the grape. I have not yet heard of any demand in a ladies' college for a Common-room smoking-room, senior or junior, but it may come. Girton College by Mr. Alfred Waterhouse, and Newnham, by Mr. Champneys, at Cambridge, Somerville, partly by Mr. Champneys, Lady Margaret Hall by Professor Blomfield, at Oxford, and Holloway College in Surrey, are among the best known, but Mr. Champneys is now adding to the number Bedford College in Regent's Park.

Chapels.—The chapel of a college is traditionally a chancel, screened off from the ante-chapel to which the non-collegiate are admitted, and is the survival of the monastic choir screened from the secular nave. In obedience to this tradition, the seats are arranged as stalls, looking inwards instead of eastward as in secular churches. Return stalls are allotted to the master or president, and his more immediate satellites. The seats are ranged in tiers rising from the gangway, the Fellows occupying the upper and more dignified rows, the undergraduates the inner and lower. Thus to take a *back* seat in a college chapel is to increase and not to diminish one's dignity. This arrangement seems so suitable as to need no amendment in modern times. There is usually no pulpit, as sermons are only occasional, commendably short, and delivered from the lectern. As is common in all collegiate churches in England, cathedral or other, the organ and choir gallery is very usually placed on top of the screen, an admirable arrangement both musically and practically. A college chapel, if of greater height than adjacent ranges of the building, and placed axially more or less east and west, should, if on the side of a quadrangle, be always on the north side, so as not to cast its shadows where shadow is detrimental. The same observation applies to the Hall if lofty, and if similarly placed. The chapel is the better without any east window as a rule, and chapel and hall alike are the better for uninterrupted ranges of side windows, which are best kept high, in the first case, on account of the stalls and their panelled backs, in the second to avoid a low light in the diners' faces, and to provide the opportunity of a high wainscoting, which is incidentally an admirable background for college portraits.

Halls.—The dining-hall of a college is, by the association of its primal functions, a place of relaxation. A meal is, or should be, a respite from cares scholastic, athletic, or, let us say, merely financial; and the meal of a well-ordered and civilised community of social instincts should be gay rather than gloomy. At the same time, since dinner is an important function, its setting should, though genial, be dignified rather than frivolous. How well, upon the whole, this geniality was understood and provided for in the past the old halls of our ancient universities abundantly testify. Though frequently sombre in general tone, impressive in stately proportions, and mildly repressive in the formal array of table and of bench, there are ornamental alleviations of carving, there are warm-toned presentments of pictorial worthies, there are decorative notes of heraldry in leaded windows, and always, in the complete and properly provided dining-hall, there are the sculptured screen and gallery. There is the raised daïs for the high table, running across the head of the room, with its appropriate bay window, full of exceptional heraldic glories, and, though anciently intended and used for the reading of homilies and lengthy graces during meat, now chiefly useful for the deposit of plate and crockery, but always architecturally an excellent feature. The screen, of course, is a mediæval survival immemorial in refectories and dining-halls. It has survived because of its obvious utility. It shuts off from the hall the draughts of constantly opened doors, the scurry of servants, and all the traffic between buttery or pantry and kitchen. It is as useful now in all these respects as heretofore, and it has an added function in screening the modern appurtenances of service lifts, hot tables, switchboards, and call tubes,

and all the constantly growing paraphernalia which science provides for the furtherance of material ends. Its ancient form still subserves modern usages, or, perhaps, more correctly speaking, has begotten them, in the happy fact that its roof provides a gallery, anciently intended for musicians, and still sometimes devoted to music, though generally in the contrary sense that while the musicians, on the occasions of college concerts, are at the upper or daïs end of the hall, the audience, or its fairer portion, occupy the gallery. It is very useful, during the crowded festivities of college balls, as a retired post of vantage for observant chaperons, or a resting-place for the breathless energetic. It has many utilities, and should on no account be omitted. Its architectural capabilities are too obvious to mention; indeed,

Photo. E. Dockree.

New Buildings, Magdalen College, Cambridge. (Sir Aston Webb, R.A., and E. Ingress Bell, Architects.)

they have been so remarkably shown in so many old halls that a few illustrations are all that is needed. I will take first the hall of the Middle Temple, the *beau idéal* of collegiate dining-halls, copied at Trinity, Cambridge, and more or less badly imitated by many modern halls. The college dining-hall, it must be remembered, is the great social centre, and the common meeting-place of the college. It has to serve for examinations and special assemblages of various sorts. It needs careful lighting at night, as by day, and careful warming and ventilating. Low- or high-pressure hot-water systems, fresh-air inlets, and the electric fan provide admirably for these requirements. It is generally wise to give it a good dancing-floor of oak boards.

The hall may be, as old halls frequently were, placed over the kitchen, buttery, &c., but should, of course, be so disconnected that kitchen smells do not penetrate it.

Libraries.—The recognised collegiate plan for libraries is not only picturesque—*i.e.* architecturally effective—but practical; the double bookcases standing at right angles to the walls give increased book space, and at the same time divide the room into secluded bays where students can sit at a table and work in comparative isolation. The bays should be not much less than 9 feet between the bookcases, and will be better from 10 to 12 feet wide, where tables are to be inserted; and this arrangement implies a window to each bay. The

Photo. E. Dockree.

Provost's Court, King's College, Cambridge. (Sir Aston Webb, R.A., and E. Ingress Bell, Architects.)

lighting of libraries is important; north and east are the best main lights, but if a long library is lit from its north and south or east and west sides, blinds or curtains will be needed on the south or west sides. Quietude of effect internally is essential, and a scholastic gravity of exterior seems appropriate, but there is no need externally or internally for the gloom and ponderosity so often bestowed upon libraries, and which, I believe, largely accounts for the detestation of libraries so markedly prevalent in youth.

In planning a non-residential college, say the modern University college of a large town, and intended of course for both sexes, the problem becomes very different. The chapel is usually not required, the hall subserves different purposes, and is usually more or less of a speech hall; lecture rooms, lecture theatres, and class rooms, scientific laboratories and work-

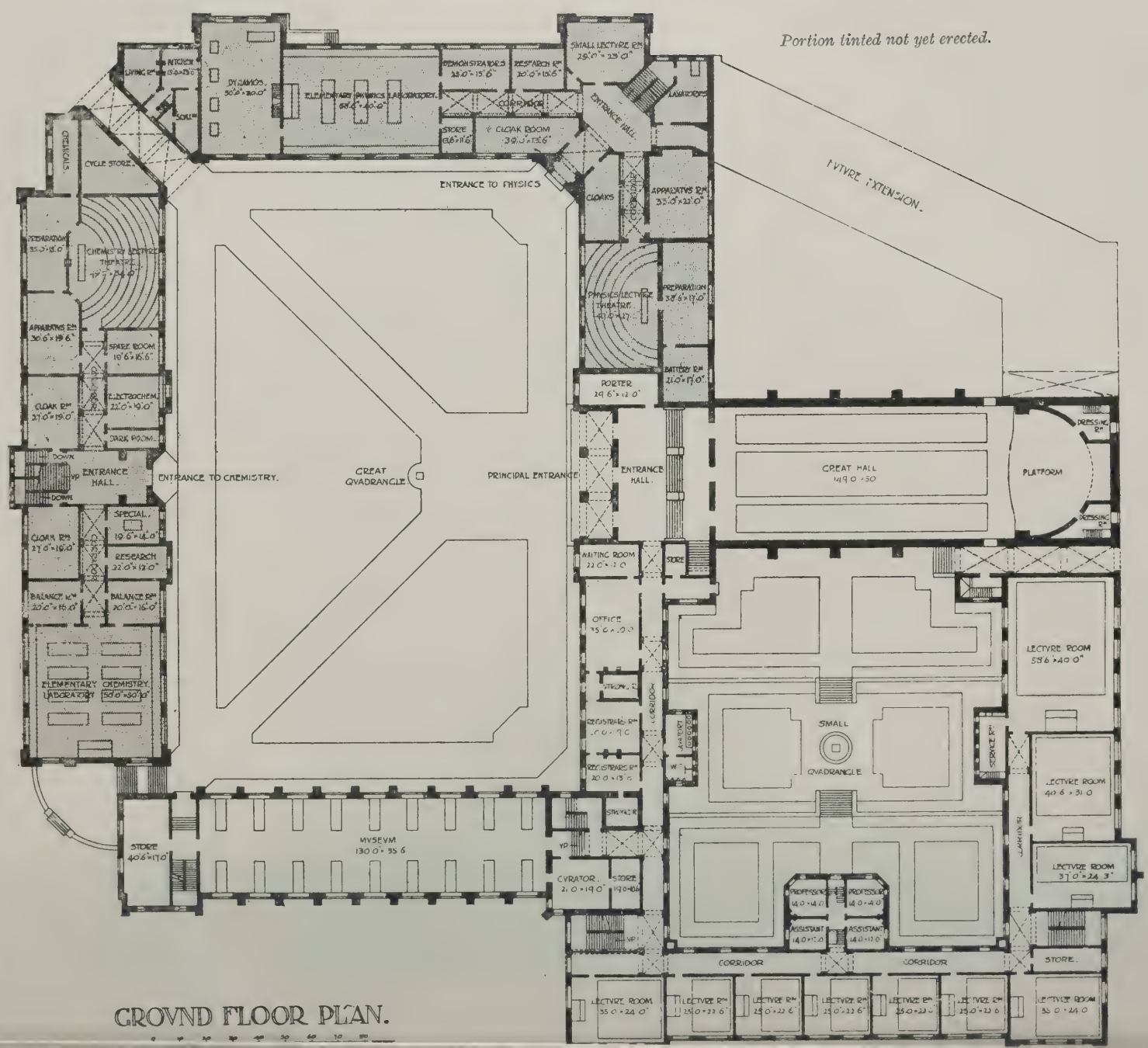
shops are needed, and, not infrequently, some sort of museum is added, and a gymnasium is not unheard of. Colleges, residential and non-residential, have been devised and built in recent years in considerable numbers, and it is interesting to observe in what manner the collegiate sense has been accepted or interpreted by those to whom it has fallen in recent years, either at Oxford or Cambridge, in immediate contact with these ancient things, or elsewhere free from such propinquity, to build colleges or schools of collegiate type, and I propose therefore to show you a few amongst the innumerable examples of such modern buildings, mostly, I am happy to say, by architects whom we are glad to reckon as our contemporaries (and on such I have little comment to offer), and a few by those who have preceded us.

Photo. A. E. Walsham.

University College, Bangor. General View from S.W (Henry T. Hare, Architect.)

Of these, one of the most interesting is that direct addition to the affiliated group at Oxford—Keble College. This college was designed with the definite intention of providing higher education for members of the Anglican Church, unable to live at the relatively expensive rates of existing colleges, and to commemorate a great churchman. The late Mr. Butterfield, as everybody knows, was the chosen architect, who, while accepting in the main the traditional arrangements of an Oxford college, departed from them in some particulars. The quadrangular plan is maintained, with the magnificent and finely proportioned chapel on its north side; but the chapel, which is internally very rich, decorated with mosaics and marbles, and vaulted, is not seated north and south in college fashion, but eastward like a parish church (an arrangement that the same architect introduced at Merton). The rooms are not arranged right and left off recurring staircases on the usual plan, but along corridors running

VNIVERSITY COLLEGE OF NORTH WALES, BANGOR.



GROVND FLOOR PLAN.

through the building. Faced with red brick, the external decoration of stripes and diapers of stone and brick with occasional panels or lozenges of slate is singular and original, liked by some, disliked violently by others. Oxford is, as yet, not quite used to it, and still resents its obviously un-Oxonian character. But though, for the surrounding buildings of an enclosed court, the chamber ranges seem too high for light and cheerfulness, the individual and relative proportions of the buildings are so sensitive and so admirable, the design in detail so full of beauty and of care, that it is sure to gain, with whatever reservations, the respect of architects. Mr. Butterfield was also responsible for the chapel of Balliol College of which we have lately been so forcibly reminded.

Near Keble is the non-collegiate, non-residential, and Nonconformist college of Mansfield by Mr. Champneys. Small, long and low, stone faced, stone roofed, and thoroughly Oxonian in effect, this college, with its quiet dress of buffs and greys, falls pleasantly into place upon its pleasant site. Its Nonconformity does not extend to its exterior, which conforms admirably with Oxford. Mr. Champneys himself has well described it in the paper referred to. That gentleman has recently made striking additions to Merton College, where he has added a new quad and the Warden's Lodgings, and to Oriel, under the Cecil Rhodes bequest.

Recreated or resuscitated Hertford is practically a new college, and has been brought into quiet architectural significance by Mr. T. G. Jackson. The chapel is traditionally collegiate, as my view will show. Mr. Jackson has added much to Oxford colleges and University buildings—his notable additions to Trinity and Brasenose having been carried on gradually for many years.

Messrs. Bodley and Garner began in 1880 their new quadrangle of St. Swithun at Magdalen, and, about eight years later, added the President's lodgings to that college. These buildings are Oxonian in type and detail, and are faced and roofed with Oxfordshire stone. They well preserve the scale of the old buildings. Mr. Bodley about 1893 added the L shaped beginning of a court to King's, Cambridge.

At Cambridge Mr. G. G. Scott in 1881 added his fine lodge court to Pembroke. Sir Aston Webb and Mr. Ingress Bell have recently built a new court, that of St. Michael's, for Caius College, faced in fine stone ashlar, and most ingeniously and adroitly planned; a new range of buildings for Magdalen in brick and stone; and for King's a new stone-faced range and a gateway tower.

Mr. Henry T. Hare has designed for Cambridge a Nonconformist theological college, for Presbyterian graduates, known as Westminster College, in brick and stone, the forerunner of his greater and more striking collegiate opportunity in the North Wales University College at Bangor. This is a fine broadly planned collegiate group not yet completed, with large quadrangles, a great hall, a museum, many large lecture rooms, a senate room, and various offices, and a dominating and most imposing tower, all stone faced, and apparently well fitted to its site, and capable of resisting for many centuries the onslaught of Welsh weather.

Sir Aston Webb and Mr. Ingress Bell have been responsible for much collegiate work in many places, notably at Birmingham University, the Science College in London, the Naval College at Dartmouth, and in the fine and comprehensive scheme of the new Christ's Hospital at Horsham. I am able to illustrate some of these inadequately on the walls, but to do justice to this work would require a separate evening.

DISCUSSION OF MR. WARREN'S PAPER.

The President, Mr. LEONARD STOKES, in the Chair.

MR. BASIL CHAMPNEYS: I rise to move a vote of thanks to Mr. Warren for his most excellent and comprehensive paper. He has gone so thoroughly into all questions of collegiate planning that there is very little left for me to say in supplement to what he has said himself. I shall only, therefore, refer to one or two problems more or less connected with the question of college arrangement, and possibly of interest to architects and archæologists. A question which has been constantly before my mind is, how the standard arrangement of staircases in college buildings came about. To me it is a great puzzle. We must remember that colleges came into being more or less on the precedent of monasteries. Both the younger and the elder occupants of institutions of the kind were housed in dormitories; and yet it appears that when colleges of the type of those at Oxford and Cambridge were first started, a totally new kind of arrangement came into existence—viz. a single staircase opening into half a dozen sets of rooms, one on each side of three floors. There seems to be nothing which leads to it at all. In the original collegiate buildings, the dormitories were small. Colleges now have a large sitting room, and perhaps a scout's or gyp room, and bedroom, in some cases exactly the same in plan as in the old institutions, but differently used. In the old days the larger room was the dormitory, where four or five students, with a Master of Arts in charge, slept; the small rooms adjoining were used as studies. The whole of that arrangement seems to be without any kind of precedent in monastic institutions which preceded them. I have often conjectured how this great and fundamental change in planning took place. The only theory which I think meets the case is this. Mr. Warren showed us the old buildings of Worcester College, Oxford, where there are a number of small buildings, each with a difference of arrangement, and each with a different staircase and sets of rooms. And these form a kind of conglomerate. Worcester is too late a precedent for New College; still more for Merton. Now it is known that in the earlier Oxford there were a multiplicity of halls. Is it possible there may have been in Oxford some sort of conglomerate of halls like that of Worcester, of earlier date, which may have suggested the plan of separate staircases, such as was adopted, as far as one can tell, by William de Merton, and certainly by William of Wykeham at a later date? I only throw that out as a hint on which others may work; whether there is evidence for it, I cannot say; but it is a solution of what has been to me a puzzle, because architectural arrangements are almost invariably founded on precedent, and it seems strange, half-way through the Middle Ages, to find an arrangement for which one can discover no precedent at all. However it originated, there is no doubt the staircase arrangement, as used by William of Wykeham, has held its own; and though the purposes of the rooms have been converted, it seems to me the best arrangement on which colleges can be planned for the present day. Many years ago, I found out that the staircase arrangement was far more economical than that of corridors. There is one great disadvantage about the latter which Mr. Warren did not mention, and that is, if you have a long corridor in a college it is almost certain to be taken advantage of for bear-fighting, cricket and football, and it becomes a nuisance. At Keble College, where such corridors exist, they have had to cut them up to prevent such uses. I hope what I have said may lead to a solution of the problem. Of course, a corridor arrangement is almost necessary in women's colleges. You cannot turn girls out into the air when they pass from room to room; and, as far as I know, they are not given to cricket and bear-fighting in the house! Therefore, when colleges are built for women, the corridor system is the right one. There is one new condition which has come into late college-planning that has caused difficulties, and has to be more or less met, and that is the predominance of science in modern education in universities and colleges. The requirements of scientific professors are exceedingly elaborate, and it is very difficult to gratify them fully with the proper preservation of the collegiate character and architectural propriety. I think that this factor may cause a good deal of trouble, but I hope its solution will not prove to be beyond the architectural capacity of the present day.

PROFESSOR F. M. SIMPSON: I have very great pleasure in seconding the vote of thanks to Mr. Warren for his exceedingly interesting paper. Few architects have such an intimate acquaintance with Oxford and with Oxford colleges as has Mr. Warren, and he has shown to-night that his knowledge of Cambridge colleges is equally great. But in his paper he has done more than deal merely with the buildings themselves. He has studied their history, the causes which brought them into being, and the changes in plan through which they have passed. The result of those studies he has brought before us in a most able and interesting manner. In regard to colleges on the Continent, he said that

"residential colleges were the feature of most ancient universities"; and "it is a curious and striking fact that it is only in this kingdom and its colonies and offshoots that the residential college attached to a university has been perpetuated." It has often occurred to me, when in a university town abroad, to inquire why that is, why there is that difference between universities abroad and universities in this country. So far as I have been able to find out, in the old Italian universities, Bologna, Padua, and others, there were very few colleges, and those colleges were simply for very poor students who came from another country. If you think of the ups-and-downs that the Italian universities experienced, of the migrations *en masse* that frequently happened of students from one university to another, from Bologna to Padua and Vercelli, for instance, from Florence to Pisa; in the latter case, the entire university passed from one town to the other after a residence of merely a hundred years—if these things are considered it will be realised that the roots of the university cannot have been planted very deeply in the soil, otherwise it would have been impossible for those changes to have taken place. These Italian universities were at their zenith before the fourteenth century—the great period, Mr. Warren has told us, of collegiate building. Turning to Germany, I rather fancy that in German universities there were no colleges for undergraduates at all. In some of the German universities, Leipzig, for instance, there were two or three colleges, but they were for graduates or Masters of Arts. They resembled the College of All Souls, Oxford, which, I think, was founded purely and simply for Fellows, without undergraduates, and to this day remains for Fellows only. The University of Paris was the first university to bring into favour the college system, and from Paris the system spread throughout France, Flanders, and into England. As regards those fifty colleges which, I think, Mr. Warren mentioned as being in Paris, how is it that they ceased to exist? Their gradual disappearance commenced towards the end of the sixteenth century, and was, I believe, largely owing to the state of the country at that time. There were the grave religious dissensions, there was civil war throughout the country, and the result was that early in the seventeenth century it is recorded that the colleges in Paris were practically empty. In England, during the second half of the sixteenth century, we had these religious difficulties, but they resulted not in civil war, but in the Reformation. The Reformation emptied the colleges of one class of students—you must remember that in all universities the greater number of the colleges were for students who were being educated for the priesthood; but contemporary with the Reformation came the Renaissance, which filled the colleges again with another set of students, in such a way that not only did they increase in size, but also multiplied to a very great extent. You may ask, Why did the same change not take place in Paris, where the Renaissance was even stronger than in England? It is rather difficult to give an answer to that, but I think it may be put down to the fact that in Paris the greater number of the colleges belonged to the clerical party, and were not confiscated as they were in England. The students left Paris, to a great extent owing to the Jesuit colleges which had been started throughout the country, and the buildings and the land on which the buildings stood were either devoted to some other clerical use or else were sold. I do not say the University in Paris ceased to exist, because that was not the case. Early in the seventeenth century the Sorbonne was rebuilt under Cardinal Richelieu, and in the middle of the century that magnificent building, now the Institute of France, which stands as the portal of the Quartier Latin, was built by Cardinal Mazarin, and was formerly known as the Collège des Quatre Nations. This building is one of the finest examples of collegiate architecture still existing. Another point I would like to refer to is this. In a big subject like collegiate architecture, Mr. Warren has a perfect right to fix his limitations, but I regret a little that he did not include in his description any reference to the big laboratories and buildings for scientific research which must now form a part of every university. For those buildings require an entirely different treatment from the old buildings that we have seen on the screen to-night. The old buildings have low rooms, small windows, and ample expanse of plain wall surface. These constituted their great charm. In the modern laboratory, there are large windows, lofty rooms, and the walling is reduced almost to a minimum. For scientific work light is an absolute necessity. The three requirements for a modern laboratory, as defined by a scientist, one might put somewhat as follows: the first is light, the second more light, and the third, still more light. There is one other little detail that I would say a word about, and that is the excellence of the illustrations shown us to-night. I think Mr. Warren very wisely discarded plans and photographs to a great extent, and relied upon those excellent old views by Loggan, and those equally excellent modern views by Mr. New. Those bird's-eye views take the place of both plan and photograph, and you can see the whole thing at one time. In conclusion, I wish to thank the Council of the Institute for the honour they have done me in asking me to second this vote of thanks, and at the same time to express to Mr. Warren the pleasure I have experienced in listening to his paper.

The Rev. T. B. LOCK, Bursar of Gonville and Caius College, Cambridge, who rose at the invitation of the President: It is a great privilege to be allowed to say a few words here, and I venture to make my few remarks with great humility in the presence of distinguished men such as I see around

me, who know more about this subject than I possibly can who am a mere amateur. There is one point which I hoped Mr. Warren would touch upon in his paper, and that is, that in some colleges there is a gallery, a long room which generally belongs to the master's lodge. Mr. Warren touched on every other part of a college, but omitted reference to the beautiful gallery at Queens' and the gallery at Emmanuel—I am thinking of Cambridge—and perhaps the Long Gallery which forms the combination-room at St. John's. And that leads me to answer Mr. Champneys' question, at least I think I can answer it. The question, if I understand it rightly, is, how came the colleges to take their present shape? Last summer I was in Derbyshire for a few weeks, and I took much trouble to study Haddon Hall, the baronial house of, I suppose, the sixteenth century. There you have an almost exact replica of a Cambridge college; you have the hall, the kitchen, the chapel, the combination-room, these are common to all Colleges; and in addition you have the long gallery to which I have referred. Queens' College, Cambridge, which was, I suppose, built about the end of the fifteenth century, is almost a replica of Haddon Hall. The arrangement is not quite the same, but there are two courts, and you pass from one court to the other through the "screens," that is to say, through the usual passage cut off from the hall. The gallery itself is in exactly the same position in Haddon Hall as the gallery in Queens'. The chapel is in the same position, and the only difference is that the kitchen is on the north side of the court, and is approached not through the screens, but you have to cross the court to get to the hall. The dwellings are separate houses ranged around the quadrangle; you might call them staircases, just as they are at Oxford and Cambridge. I think, with this remarkable similarity between a Cambridge college and Haddon Hall before you, there cannot be much doubt as to the origin of the collegiate form which we see so frequently repeated. One thing I very much regret is that Mr. Warren did not show you a slide of his splendid improvement of the hall of my own college. I think there is a picture of it towards the end of the room, showing the beautiful screen which he has placed there, turning a bare and very poor interior into a splendid mediæval hall. It is one of the most remarkable transformations we have had in Cambridge. Not only so, but he has helped us to restore our old college hall. The original hall of Gonville, which was built in 1440, was forty years ago, when I was an undergraduate, entirely obliterated, and there was absolutely nothing to be seen which would suggest the existence of the ancient work. Now we have dug it out from the rooms with which it was filled by Salvin in 1850. We found enough of the main timbers of the roof, and we found enough of the mouldings to be able to restore them, so that we have the roof with the original principals and the exact mouldings of 1440. But the needs of space did not allow us to restore the floor, and the present floor is five feet above the old one. But we have restored the old hall, and just before that we restored the library; and anyone coming to Cambridge can now see in my own college another of those instances of the college buildings with the hall, combination-room, library, chapel, master's lodge, all in their appropriate places, just as they were nearly 500 years ago. As an instance of the advantage of having one side of a quadrangle open, perhaps I might mention, in the presence of Mr. Jackson, his ingenious solution of a difficulty of that kind. When the court in which the splendid Geological Museum, Law Library, and new Archæological Museum which Mr. Jackson is now building was being arranged, we wished to keep an opening on one side of this long court, and we had much discussion as to how it should be done. Mr. Jackson suggested that we should put the library on the top of open arches. That suggestion seemed at once to solve the question; there is fresh air coming in through three handsome arches in the middle of the space, and on the top of those arches is a beautiful library, devoted to Law, which Mr. Jackson has built for us. That seemed to us to be an ingenious and economical plan, and one, following Dr. Caius' advice, which would enable us to get fresh air through from one side of the court to the other.

Mr. T. G. JACKSON, R.A.: I labour under the disadvantage of having heard only the latter part of Mr. Warren's paper, and therefore I am not quite aware how far he has touched upon anything which I may have to say, and I may be going over the same ground. I may offer one explanation of the college plan. It seems to me that the college plan, like Oxford itself, or Cambridge, has grown up insensibly, without any definite motive at first. We cannot say how universities began; nobody ever founded Oxford or founded Cambridge; they grew up accidentally as it were, and the colleges themselves also grew up in an accidental way. Originally, and for a period of two or three hundred years, there were no colleges; the university existed without them. Then young men were lodged in halls, of which, if we may believe Anthony à Wood, there were at Oxford at one time three hundred. They were private houses, and were often the property of citizens, who leased them to some Master of Arts, who for his own profit took in students and lodged them, but did not teach them, except rarely. There was a common dining-room, and a few bedrooms, and that is all. They were small places and were given different names, such as "Black Hall," "Lion Hall," and so on. Glassen Hall was remarkable for having glass in its windows. There was also "Brasenose Hall," which, of course, was named after the bronze knocker on the door long before Brasenose College existed. These houses of the burgesses in the town were after

the ordinary domestic type; two or three of them would be thrown together, and in that way you get the origin of the Oxford staircase. And when colleges came to be founded, they were often made up of half-a-dozen halls thrown together. For instance, Brasenose College, founded in the time of Henry VIII., absorbed five—Amsterdam Hall, Salisbury Hall, Little University Hall, Broadgates Hall and Brasenose Hall—and they were all swallowed up into one college. That is the origin, I think, of the plan of the colleges in our universities. I think they were designedly not made in imitation of conventual buildings. There was always between the university and the regular clergy a great deal of rivalry and ill-feeling. When the Friars came to Oxford they were ill-received; there was a constant struggle of the university with the religious Orders to prevent their taking a degree in theology without passing through the secular course and taking a degree in Arts. And in regard to the earliest College, that of Walter de Merton, it is remarkable that in the thirteenth century one Article in the Statutes was that the members of his College should on no account take religious Orders. Therefore I do not think the conventual type presented itself to the mind of the college builder or to anybody connected with the university. There was always some revulsion against anything which would seem to conform to the type of the regular Orders. That gives us the type of college which those of us who have been in the old colleges know so well. We lived in the same rooms where our forefathers lived, and fifty years ago—for it is more than that since I took my degree—we still lived in a modified mediæval way. We dined off pewter, and had none of the modern appliances, such as hot and cold water laid on and bath-rooms. A cold tub in the bedroom was all that we had then. But in one respect the rooms are now occupied differently from the use of the mediæval student. As Mr. Champneys has explained, each set consists of one large room with small closets attached. The large room is now the sitting-room, but in the middle ages it was the *cubiculum* or bed-chamber where three or four Fellows and Scholars slept. The Fellows had tall beds, and the Scholars' beds were "trookyl"—that is, truckle—beds and were pushed under the Fellows' beds in the daytime. Out of this large room there were little closets, and now two of them are thrown together to make a bedroom, and the third forms a pantry or "scout's-hole." Those little studies were the *musaeola*, where the men were supposed to read, and they were furnished with a plain shelf and a joint stool, a curtain perhaps, and nothing else. There were no means of keeping themselves warm, except when they came out into the big room, where there might be a fire. These three or four people were *concamerales* or chamberfellows, from which originated the word "chum." It was not until the eighteenth century that you find, in the old minutes of the College, that the habit of "chumming" had gone out of fashion, and that men would have rooms to themselves.

MR. AYMER VALLANCE: There is no doubt Mr. Jackson has correctly explained the origin of separate staircases in Oxford. You must remember that the colleges there were not built on a formal plan from the outset, but that they grew up by a process of gradual development. All the earlier ones before New College were composite structures, embodying older and smaller tenements or halls. But I do not agree that the staircase system was adopted for a distinguishing mark of the seculars as opposed to the regulars. There is no trace anywhere in Oxford of such a thing as the monastic dormitory. On the contrary, at the monastic college of Gloucester (now Worcester), composed as it was of separate settlements or cells, precisely the same arrangement as in secular colleges was adopted as an established Oxford custom, and may be seen to this day. One by one, the different buildings were added when they were required. In the earliest colleges, for instance, there was no chapel. And the reason was that every college stood within a parish, and every member of that college was a parishioner, and, as such, it was his duty to attend his parish church. But graduaally, as the corporate life of a college drew its members closer together, it was natural that they should seek to express that common life in common worship. They then petitioned the Bishop for license to build a private chapel of their own, and the little oratories gave place to chapels where they could have the privilege of Mass celebrated in their midst. And, further, the ties which held them together in life held even beyond the grave, and thus it came about that some colleges sought and obtained the right of sepulture within their walls. The earliest graveyard is that of Merton College, which, however, is in part parochial. The first private graveyard of a college was that at New College. Hence the cloister to surround the garth, which was consecrated expressly as a *cimiterium*. The second instance was the cloistered enclosure on the north side of the Chapel at All Souls', and latest the one-alley cloister to the graveyard at the Jacobean College of Wadham. Meanwhile Bishop Waynflete was the first to embody the cloister organically as part and parcel of the quadrangle at Magdalen College. And yet, since early colleges did not start upon a formal plan, as exemplified by the oldest buildings extant, those of Merton College, the adoption of the complete quadrangle was only gradual. The first true quadrangle, planned at the outset, was that built at New College, under the direction of William of Wykeham, who has left an indelible mark on Oxford collegiate architecture. The T-shaped chapel-plan, which it is sometimes alleged he borrowed from Merton Chapel, is, in fact, due solely to William of Wykeham. He could not have copied it from Merton Chapel, which was not finished until some forty years *after* his own. The two really

belong to radically distinct types. Merton ante-chapel is the transept of an unfinished cruciform church with central tower; while New College ante-chapel, and those which immediately followed its lead, viz. All Souls', Magdalen, and Old Queen's College (the last-named in 1518), are all of them short naves of two bays with aisles of equal length. Their aisles, under parallel longitudinal roofs, open out from the nave through arcades on either side. The succeeding chapels, built after the Reformation, are based more or less on a misunderstanding of the true Wykehamite ideal. Wadham ante-chapel (1613), externally transeptal as regards the roof-ridges, has internally the nave arcades of New College; Oriel assimilates most nearly to the transeptal model, while Brasenose ante-chapel, the latest in date (1656–61), represents a complete confusion of motifs. The north and south elevations of the ante-chapels tell the same tale as their roofs and interiors. For while the ends of those at New College, All Souls', Magdalen, and Old Queen's College (the last-named depicted in a plan by Michael Burghers) are all unequivocally the lateral walls of aisles, on the contrary the ends of the ante-chapels of Wadham, Oriel, and Brasenose, all being gabled, are much more nearly allied to the transeptal form of Merton College Chapel, with its arc window at each end, though Wadham Chapel has a pair of windows at the north end like New College, and Brasenose has a single window, but that square-headed and out of harmony with the gable by which it is surmounted.

Mr. WARREN, briefly responding, and referring to Mr. Aymer Vallance's remarks, said that Mr. Vallance had misunderstood him: he did not say that the T plan became universal, but that in several colleges it had been adopted. He did not mean to suggest that anything but the shape of the ground plan was accepted and did not refer at all to the manner in which the superstructures were carried out.

At the conclusion of his Paper, Mr. Warren expressed his acknowledgments to Sir Aston Webb, Mr. Reginald Blomfield, Mr. Basil Champneys, Mr. Henry T. Hare, Mr. T. G. Jackson, Mr. Mervyn Macartney, Sir Theodore Morison, Sir Chas. Nicholson, Mr. E. H. New, Professor F. M. Simpson, Mr. H. H. Statham, Mr. Raymond Unwin, and the Editors of the *Architect* and *Country Life* for the loan of slides and drawings and for much kindly help and information, and to Messrs. MacAlister, Dircks, and Northover for invaluable assistance in every direction. Amongst the very large number of slides shown were examples from Genoa, Santiago di Compostella, Copenhagen, Coimbra, Paris, and Louvain; and many plans, photographs, and perspective drawings of work by Sir Aston Webb and Messrs. Ingress Bell, Reginald Blomfield, Champneys, Jackson, and H. T. Hare were exhibited on the walls.

REVIEWS.

SCHOOL BUILDINGS.

School Planning: being a Practical Treatise on the Planning of British Training Colleges and Schools. With 150 illustrations. By Philip A. Robson, A.R.I.B.A. [Nicholson Smith, No. 3 Amen Corner, London, E.C.]

This important Treatise, although dealing with buildings for educational use, and therefore primarily meant for the architect, will prove of interest to the statesman, the expert, and the public at large, inasmuch as it is the latest word from the pen of one who has given many years of close study to the subject of school planning, and who as an architect has erected several buildings of standard merit, one of which, St. Gabriel's College, Camberwell, is viewed, and rightly so, as one of the finest training colleges for women in the country.

Mr. Philip Robson has dedicated his work to his father, the late architect to the Board of Education, in a few well-chosen words, recognising, as we all do, the great work Mr. E. R. Robson initiated and carried out when architect to the London School Board, and later when at the Board of Education.

The work is divided into a series of chapters detailing the author's views upon the Hygienic Planning of Schools, the Board of Education Regulations, Derbyshire Schools, Higher Elementary, Secondary, and Technical Schools, Notes on Reports and Cost, Addendum.

I would particularly commend to the notice of readers the excellent advice given by the author upon pages 8 and 9 of his work, wherein he deals with special points, some of which I venture to suggest are worthy of consideration at head-quarters.

Possibly, over one or two matters touched upon, experts will differ from Mr. Robson, as, for instance, take suggestion numbered 4, in which he states that any room beyond 25 feet or more in width requires subsidiary lighting. The view of some capable of advising is that any room beyond, say, 23 feet in width is not efficiently lighted if lighted from one side only. And again, taking his suggestion numbered 7, no matter what the number of scholars may be, no class room should be less in height than stated in the Board of Education Code Rules. A height of 10 feet is insufficient. Mr. Robson's suggestion that there is food for serious reflection and consideration as to the Board of Education Code Rule regarding the floor area allowed per scholar (1) in an elementary school, (2) in a secondary school, is excellent, and goes without saying, for to assume that a boy or girl of 16 years of age when attending an elementary school is sufficiently provided for on the 10 feet basis, whilst insisting upon the 17 feet to 18 feet basis for the same scholars if 17 years old, but attending a secondary school, appears to me, as it no doubt will to his readers, to require amendment, and I am in full accord with the suggestion of Mr. Robson as to how amendment should take

place both hygienically and satisfactorily from the point of view of the master. No doubt many of the points raised by the author, excellent though they undoubtedly are, are recognised as being out of the question so long as the Board of Education publish Building Rules, which must be adhered to by order of the Board and local and other authorities who are dealing with public funds, grants, donations, &c.

The information given, no matter what the special subject under discussion may be, is concise and fully detailed. The chapter dealing with Higher Elementary, Secondary Schools, Technical Schools, and Training Colleges, is possibly the most interesting in the book, as in it Mr. Robson has given the reader a fund of useful information, condensed into some 17 pages, which cannot fail to prove instructive.

The illustrations are numerous and well selected. If there is one point I would criticise with reference to the plans, it is that the compass-point might have been added in all cases. I note that the number of illustrations given upon the title-page is about 100. This is evidently a misprint, as there are fully 150 plans, &c.

Mr. Robson tells his readers, to quote his own words (see his preface), that "No school illustrated is older than 1895, and others are as recent as 1911," which is interesting to the reader, who, upon examining the illustrations, will gather with what rapidity we are amending and experimenting in the hope of reaching that goal which authorities, rightly or wrongly, may decide is the best possible; for, taking many cases, excellent though the choice of the plans may be, these do not conform, without amendment, to the Board of Education's known wish, which is to the effect that in an elementary school the usual type of plan, that is to say, a plan showing the class rooms designed to open directly into the hall, is now regarded with disfavour for new buildings, and only approved, so I am given to understand, where the circumstances are exceptional.

With regard to St. Gabriel's College, there has been some modification of the original plan, in which the writer of this review has been actively associated with the author, by request of the late Canon Brooke and the Council of the College. A large hall approached from the entrance hall has taken the place of Mr. Robson's scheme for an examination hall, swimming bath, gymnasium, etc., as shown upon the plans illustrated.

Probably Mr. Robson's scheme was deemed too expensive, and was therefore omitted by the Council in favour of the large assembly hall in question.

I note that Mr. Robson gives the date of the foundation of the British and Foreign Schools Society as 1811, but this Society, as a matter of fact, was founded in 1808, the National Society, whose centenary has just been celebrated, being founded in 1811.

I have to criticise this otherwise excellent work in one matter: I am of opinion that the author would have been better advised if he had ended his treatise with page 108; that is to say, my view is that the compendium of firms specially noted for school fittings would have been better omitted as flavouring too much of the advertisement, and therefore unnecessary in a school treatise chiefly written for the professional man and the educational expert.

A. Heron Ryan-Tenison [*F.*].

CORRESPONDENCE.

Architect as Arbitrator.

Cannes: Feb. 1912.

To the Editor, Journal R.I.B.A.,—

Dear Sir,—The recent discussion on the position and duties of an architect as arbitrator may receive an illustration from my own professional experience in Italy.

When a certain job was practically completed, the client refused to recognise my certificate or to pay any further sums to the builder, who was then obliged to proceed against him in the ordinary courts of law. All sorts of quibbles and pretensions were set up to excuse non-payment; and the case went to several courts in succession.

Legal procedure in Italy is much more complicated and uncertain than in England, and the opportunities for delay and obstruction more abundant. However, after a considerable period, an *interim* declaration was made by one of the higher courts to the effect that "if the facts are as stated by the plaintiff, the Court is of opinion that the architect's decision should be accepted."

Proofs were abundantly supplied; but, owing to some supposed, or pretended, error in their presentation, the whole process of proof had to be gone through again, after another year's delay. Appeals and counter-appeals followed; until—some twelve months ago—after *eight years* of constant litigation, the final Court of Cassation at Turin decided that my certificate and decision (liquidation) must be accepted, and ordered the client to pay all the costs of the various actions, with full interest on the amount I had originally certified for.

The contract clause upon which stress was laid was that which, after stating that the sum to be eventually paid to the builder by the client should be determined by the architect, went on to say:—"... and both the parties declare they accept once for all his (the architect's) decisions, liquidations, and certificates as absolute and definite (or final) between the parties, renouncing any and every eventual objection (or opposition)."

Might it not be possible to incorporate a clear statement somewhat on these lines into the Institute Form of Contract?—Faithfully yours,

William Scott [*A.*].

S S

9 Conduit Street, London, W., 24th Feb. 1912.

CHRONICLE.

The Question of Registration.

As a result of the Special General Meeting on 8th January 1912 [see report, p. 306], the Council have appointed a Committee to consider the whole question of Registration, with power to take evidence. The Committee consists of the President, the four Vice-Presidents, and the Hon. Secretary, together with Sir Aston Webb, R.A. [*F.*], Messrs. A. W. S. Cross [*F.*], James S. Gibson [*F.*], J. Alfred Gotch, F.S.A. [*F.*], Edwin T. Hall [*F.*], George Hubbard, F.S.A. [*F.*], Sydney D. Kitson [*F.*], C. Stanley Peach [*F.*], John Slater [*F.*], Septimus Warwick [*F.*], Percy S. Worthington [*F.*], W. H. Burt [*A.*], F. R. Hiorns [*A.*], H. W. Wills [*A.*], and A. Needham Wilson [*A.*]. Mr. John Slater has been appointed Chairman of the Committee, and Mr. John W. Simpson Vice-Chairman.

Prize Drawings for Exhibition in the Provinces.

The following selection from the premiated designs and drawings in the Institute Prize Competitions will be exhibited during the next few months under the auspices of the Allied Societies :—

Royal Institute Silver Medal (Measured Drawings).—Drawings of Compton Wynyates (1 strainer) by Mr. A. E. Maxwell (under motto "Zeta"), awarded the Silver Medal and Ten Guineas; drawings of The Octagon, Ely Cathedral (1 strainer), by Mr. A. B. Allen (under motto "Shopeinshoudes"), and of the Church of Santo Spirito (1 strainer), by Mr. Walter M. Keesey (under motto "Arno"), each awarded a Certificate of Hon. Mention.

Soane Medallion.—Designs for a Guildhall: 3 strainers by Mr. Wm. Friskin (under motto "Circle City"), and 3 strainers by Mr. Piet de Jong (under motto "Antæ"), awarded a Certificate of Hon. Mention and £50 each; 2 strainers by Mr. C. A. Harding (under device "Sailing Ship"); and 2 strainers by Mr. Bertram Lisle (under motto "Vista"), each awarded Hon. Mention.

Owen Jones Studentship.—Drawings by Mr. Noël H. Leaver (2 strainers), awarded the Owen Jones Certificate and £100.

Pugin Studentship.—Drawings by Mr. James Macgregor (1 strainer), awarded the Medal and £40; drawings by Mr. C. Peake Anderson (1 strainer), drawings by Mr. J. R. Leathart (1 strainer), drawings by Mr. W. J. P. Jones (1 strainer), each awarded a Certificate of Hon. Mention.

Tite Prize.—Design for the Central Courtyard of a Royal Exchange, covered with a Roof: 2 strainers by Mr. Louis de Soissons (under device "Red Lion"), awarded the Certificate and £30.

Grissell Gold Medal.—Design for an Isolated Exhibition Building: 2 strainers by Mr. T. Braddock (under motto "M.CM.XII."), awarded the Medal and Ten Guineas.

Arthur Cates Prize.—Drawings by Mr. J. B. F. Cowper, awarded the Prize of Forty Guineas.

The late Alexander Graham, F.S.A. [*F.*].

Mr. Alexander Graham, F.S.A., formerly Hon. Secretary of the Institute, died on the 9th February at his residence, Carlton Chambers, 4 Regent Street. It is understood that Mr. Graham was in his 83rd year, but he showed few signs of the decrepitude which usually accompanies such an advanced age and retained to the last the erect bearing and cheery manner which had always distinguished him. He had suffered from occasional heart trouble during the last two or three years, but still supervised his practice, and was not taken seriously ill till a few days before his death. At the funeral, which took place at West Norwood Cemetery on the 21st inst., the Institute was represented by Mr. Leonard Stokes, President; Mr. John W. Simpson, Vice-President; Mr. Henry T. Hare, Hon. Secretary. There were also present Sir William Emerson, Past President, Mr. A. W. S. Cross [*F.*], and other members of the Institute, with the Secretary, Assistant Secretary, and Librarian.

At the Institute last Monday, Mr. Hare, in formally announcing the decease, gave details of Mr. Graham's connection with the Institute. Elected Fellow in 1879, he had always taken an active part in the affairs of the Institute. He served for twenty-two years on the Council, during this time filling the office of Vice-President for four years, of Hon. Secretary for ten years, and serving on numerous committees of Council. He retired from the Hon.-Secretaryship about three years ago. He was for several years a member of the Board of Examiners, also of the Literature Standing Committee, of which he was sometime Chairman, and of the Records Committee. He was most assiduous in the discharge of the duties attaching to these positions, rarely missing a meeting either of the Council or of the General Body. In the early years of his membership he was a frequent contributor to the Transactions of the Institute, and special mention should be made of his valuable papers, beautifully illustrated with his own drawings, on the "Remains of the Roman

Occupation in Algeria and Tunisia,"* which formed a notable contribution to the archæology of North Africa. Mr. Hare having moved the resolution of regret and condolence recorded in the Minutes (p. 305), the President, before putting the motion from the Chair, asked Mr. Hare to read to the Meeting the following letter which had been received from Sir Wm. Emerson :—

19*th Feb.* 1912.

DEAR MR. PRESIDENT,—I very much regret my inability to be at the meeting this evening to express as I would wish my own personal sense of loss at the passing away of our old friend, Alexander Graham, and to join in the tribute of respect and esteem that will be paid him, not only by his former colleagues on the Council, but by the numerous body of members who knew and appreciated his sterling qualities.

A steadfast supporter of the Institute, he was from the first one of the most active and zealous of its workers. During my term of office as Member of Council, as Hon. Secretary, and afterwards as President, I had frequent opportunities of observing the high-mindedness and disinterestedness he displayed in all that he did for the Institute. A man of the strictest probity and integrity, he placed the honour of the profession and the well-being of the Institute before everything : to preserve the one and secure the other he would count no personal sacrifice too great.

Mr. Graham, when he was elected Hon. Secretary, must have been nearly approaching his threescore years and ten, and though at that age his conservative tendencies were somewhat strongly pronounced, he was never intolerant of the views of those who differed from him. As I remember him at the Council meetings he spoke but seldom ; and if when some necessary movement was in question he was a little lacking in initiative, when once a course of action was decided upon he would devote himself to the work expected of him with all the zeal and thoroughness of a man many years his junior.

His courtesy and urbanity of manners were familiar to us all ; no one could discharge with greater distinction the various public and social functions that fall to the lot of the Honorary Secretary of the Institute. He was true and sincere in his friendships, ever sympathetic and warm-hearted, and one of the cheeriest and most agreeable of companions. I know personally that not a few young architects have cause to be grateful to him for his kindly advice and assistance.

For myself I deeply deplore his removal from us, and beg to be permitted to associate myself in the resolution to be moved this evening recording our sorrow at the loss we have sustained and our sympathy with his relatives.

Yours faithfully,
WM. EMERSON.

* TRANSACTIONS, N.S., 1884-85, 1885-86.

The Resolution having been put from the Chair, at the request of the President the whole assembly rose and silently voted their assent standing.

Mr. Graham, who was a Cumberland man, served his articles with J. H. Stevens, and from 1859 to 1865 was a draughtsman in the War Office under Sir Douglas Galton. He started practice in 1865, his early works including Kingfield Church, Cumberland, the Nichol Forest Schools in the same county, and the Continental Bank, City. In 1869 he obtained the post of Surveyor to the Armourers' Company, and held the appointment for nearly forty-two years, resigning only last December. His extensive hospital connection began through Miss Florence Nightingale, with whom he was intimately acquainted. Among hospitals erected from his designs were the Swansea Hospital, Lincoln County Hospital, St. Albans Hospital, the Cancer Hospital, Fulham Road, the " Lewis " Colony for Epileptics, erected at a cost of over £60,000, and consisting of separate and single-floor houses, with hall, workshops, infirmary, theatre, chapel, etc., in the Elizabethan style ; and the Montreal General Hospital. His latest and perhaps most important hospital works were the new Research Institute and Electrical Department at the Cancer Hospital. He built the new Nurses' Home, opened in 1905, for the same hospital. Mr. Graham had also a considerable general practice. He built the warehouses in Moor Lane for Messrs. Welch, Margetson & Co., blocks in St. James's Court, Buckingham Gate, for the Law Guarantee and Trust Society ; premises in Elm Street, Gray's Inn Road, for Messrs. W. H. Wagstaffe & Sons. He did a considerable amount of work for the Armourers' Company, the most recent being the new buildings in Copthall Court and Drapers' Gardens, E.C. He acted as consulting architect, with Messrs. Chorley, Connon, & Chorley as the architects, of the Women and Children's Hospital, Leeds, and as assessor in several important competitions, including those for the Weston-super-Mare Pavilion, Wandsworth Guardians' Offices, Bury Infectious Diseases Hospital, Leigh Infirmary, and Rochdale Infirmary. Since 1909, when Mr. Graham's health first began to fail, Mr. T. A. Pole [*A.*], who for some years assisted him, has been associated with him in his practice. Mr. Graham was the author of a volume, published by Longmans in 1902, entitled " Roman Africa : an Outline of the History of the Roman Occupation of North Africa," and was joint author with Mr. H. S. Ashbee of a book of Travels in Tunisia. He was an accomplished draughtsman, and reproductions of some finely finished drawings of his appeared some years ago in the Institute TRANSACTIONS and in *The Builder*.

Housing the London University : Suggested Site.

The *Times* of the 19th inst. published some proposals which have been put forward regarding a site for the future housing of the University of

London. In the Fourth Report of the Royal Commission on University Education in London, the Commissioners observe: "We think it is in the public interest, as well as in the interest of the University of London, that as large a site as possible should be obtained in a central position, and buildings erected for a reconstituted University which would be the visible sign of its recognition and acceptance as a great public institution." Four plots of land on the Duke of Bedford's estate are suggested as corresponding closely with the conditions laid down in the report. To quote from *The Times*:—

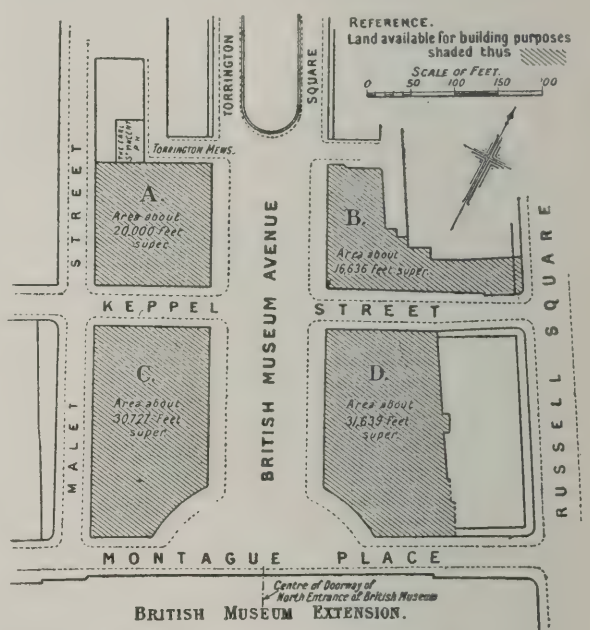
The four plots lie two on each side of a noble avenue leading from the north face of the King Edward VII. extension of the British Museum to Torrington Square, and together cover an area of nearly 2½ acres. The plan published herewith indicates their exact position and the approximate area of each. The Duke of Bedford has granted an option to purchase these four sites within a period which will expire next Quarter Day, and if the necessary funds for their purchase can be raised before March 25 a real beginning will have been made towards a new era for the University.

The question immediately arises how these blocks of land might best be used for the purposes indicated in the Commissioners' Report, and it is extraordinary how completely suitable the disposition of the land appears to be for the purposes required.

One of the most urgent needs is a great Assembly Hall worthy of the University and able not only to serve the same purposes as the McEwan Hall in Edinburgh or the Whitworth Hall of Manchester University, but a great meeting-place for the metropolis where the nation and the Empire can come into touch with the University life, where great intellectual movements can be initiated or encouraged. Block C on the subjoined plan, bounded on all four sides by streets, with gardens on the west, the British Museum on the south, and the broad avenue above referred to on the east, is admirably adapted for the purposes of such a Hall with its necessary subordinate rooms and offices. The corresponding block marked D on the plan would be equally well adapted for a Senate House, a building in which there should be large rooms for the governing body of the University and for the meetings of the many committees which will have to deal with various aspects of the University work. In this building there should also be the private rooms of the Vice-Chancellor, Principal, and other high officers, and for the necessary headquarters staff. Block A would be large enough for the erection of a third building, which would provide for a hall for the meetings of Convocation, Common Rooms for Professors and Graduates, club-rooms for the Students' Union and other societies, and headquarters accommodation for the Officers' Training Corps, which is one of the most flourishing of the student organisations in the University, and which is likely to become increasingly popular as the University meets with growing success the educational needs of the metropolis.

On the fourth block provision should be made for smaller lecture halls in which important public lectures could be given to smaller audiences than those which would be accommodated in the Assembly Hall, and on this plot of land suitable rooms could be provided for the housing of the Central University Library, and reading-rooms for students engaged on advanced work. There would also doubtless be space for other things if these were shown to be required as times goes on.

It is difficult to over-estimate the effect which a great group of University buildings of the kind described above would have upon the public attitude towards the University, or to exaggerate the value to students and teachers alike of having central buildings immediately contiguous to the priceless stores of artistic, literary, and archæological material in the British Museum. The plots of land in question are within easy reach of the termini of the great trunk lines coming into London from the north and west, the directions in which the great mass of the active population of this country lies; but the new headquarters of the University would not only be easily accessible from the northern, north-western, and western suburbs, it would be equally accessible to other parts of London. Euston Square Station on the Metropolitan Railway is less than ten minutes distant; the British Museum Station on the Central London Railway is but a few minutes away; equally near is the Tottenham Court Road Station on the Hampstead line, and Russell



LONDON UNIVERSITY BUILDING SCHEME: PLAN OF SUGGESTED SITE IN BLOOMSBURY.

Square on the Piccadilly Railway. The site is almost equally convenient for teachers and students coming to it from University College, King's College, the London School of Economics, and Bedford College, whilst it is much more convenient than the present University buildings for the East London College, the London Hospital Medical School, St. Bartholomew's Medical College, and, indeed, most of the medical schools. A glance at the distribution of the schools of the University over the map of London will show that the new site, while immensely more convenient for a great majority of the schools, is less convenient than the present site for scarcely any of them. In other words, it is central. It is also spacious and capable of worthy architectural treatment. It would indeed be a loss to London if the opportunity which has been offered to its inhabitants and to the University should be allowed to slip.

It will cost a good deal of money, but London is full of rich men, and this is a great opportunity for what Lord Rosebery has called the "magnificent citizen."

A New Road to the West.

A conference was held Thursday, 15th February, at the offices of the Road Board to discuss proposals for the construction of a new approach road to London on the western side. Sir George S. Gibb, Chairman of the Road Board, presided, and there were present representatives of the Traffic Branch of the Board of Trade, the London and Middlesex County Councils, the Boroughs of Kensington, Hammersmith, and Fulham, the Buckingham County Council, and the Urban District Councils of Chiswick, Brentford, and Heston and Isleworth. The Chairman stated that the Board had hitherto dealt with roads in the various administrative counties, but had not made any grants to county or Metropolitan boroughs, and they had reserved the sum of £680,000 out of the estimated £2,000,000 accruing up to 31st March next for the purpose of meeting the needs of urban improvement. They were anxious to assist the construction of new approach roads in populous centres where they were most urgently needed, and it would be generally admitted that they ought to begin with London. Consequently they had decided, subject to obtaining the necessary Treasury sanction, to make an offer of assistance to the proposed new western approach to London, and as funds became available similar large works would be selected according to their importance and public utility in all parts of the country. The western approach was the most pressing of all the London schemes.

The proposed new road is to be 80 feet wide, and to extend from the West Cromwell Road to Hounslow, by way of Hammersmith and Brentford. The congestion at Hammersmith and Brentford is notorious, and at present Cromwell Road, one of the finest roads in London, is wasted owing to its having no outlet. The proposed plan is merely a suggestion, and may be varied in detail. The responsibility for settling the plan, as well as for the practical execution of the work, must rest with the local authorities, the position of the Road Board being merely that of contributors to the cost. On a point of detail, the Brentford Urban District Council have suggested the widening of Brentford High Street at a cost of £347,000, and have applied for assistance to that scheme, but the Board consider that a new road is better as well as cheaper than widening. The cost of the road is estimated approximately at £1,000,000 within London and £750,000 in Middlesex, and an Act of Parliament will probably be necessary. The Road Board, it is stated, are prepared to spend £875,000 towards the proposed road.

The London Society.

At a meeting called by the promoters of the movement, and held at the Galleries of the Royal Society of British Artists on the 9th February, it was decided to establish a Society under the above title, with the object of advancing the practical improvement and artistic development of London. Sir Aston Webb, R.A. [*F.*], presided, and letters in support of the movement were read from the Earl of Plymouth, Lord Claud Hamilton, M.P., Sir W. H. Lever, Bart., Sir E. J. Poynter, Bart., Lord Alexander Thynne, M.P., Sir Wm. Richmond, R.A., and others. Among the speakers at the Meeting besides those mentioned below were Mr. Harold Cox, Sir John Benn, Sir Thomas Brock, R.A. [*Hon. A.*], Mr. T. Raffles Davison [*Hon. A.*], Mr. W. D. Caröe [*F.*], and Mr. Raymond Unwin [*F.*].

The Chairman explained that the first object of the Society was to interest Londoners in London. The promoters desired to create a public opinion which would support public authorities in carrying out different schemes which might appear to be beneficial for London as a whole. The artistic side of the management of London had received comparatively little attention, and it had been thought that, if painters, sculptors, architects, engineers, surveyors, members of Parliament, and all others interested in art, should discuss these matters and inform the public from time to time, by degrees works of which London stood in urgent need might be carried out. He was convinced that Government Departments and municipal authorities desired to do the best they could for London, and if they were backed up by public opinion they would do a great deal more than they could at present. They would want the counsel of the very best men in London, and the assistance of such bodies as the Royal Academy, the Royal Society, the Royal Institute of British Architects, the Institution of Civil Engineers, the Arts and Crafts Society, and all societies concerned with the development, and especially the artistic development, of London. The Royal Society of Arts had already promised to help. A constitution would have to be drawn up for the Society ; and there would be wanted, besides, a President, of acknowledged authority and wide outlook, and a Committee full of enthusiasm and taste, tempered with prudence and foresight.

On the motion of Professor Beresford Pite, a resolution was passed heartily approving of the formation of the Society. Captain Swinton, in moving a resolution authorising the Committee to draft a constitution, said that in Edinburgh the Cockburn Society, which was much like the London Society, had existed for nearly eighty years. Its object was to look after the beauty of Edinburgh and to see that nothing horrible was done. The value of that Society was great, for it was extraordinary how few bad buildings were put up in that city, and how careful people were to conform to the artistic standard.

The annual subscription for London members is a guinea, for country members half-a-guinea, and for colonial members five shillings. The Hon. Treasurer is Dr. Stephen Miall, 116 Fore Street, E.C., and the Hon. Secretary, Mr. H. J. Leaning, 28 John Street, Bedford Row, W.C.

Reinforced Concrete: The Proposed L.C.C. Regulations.

The Times Engineering Supplement of the 14th February has some admirable criticism, by an engineering correspondent, of the proposed L.C.C. Regulations for reinforced concrete buildings. We give extracts as far as space permits:—

The rules suggested have met with a good deal of criticism, since some of them are dictatorial to an unprecedented degree, some would debar the use of combinations of systems such as any independent engineer would adopt as a matter of course in his everyday practice, and others would prevent any variation from the present practice in reinforcing columns. No doubt a man could obtain special exemption in any particular instance by an application to the London County Council, somewhat as has to be done at present with reinforced designs, but the principal object of the proposed rules is to do away with the necessity of such applications.

Part IV. of the London County Council (General Powers) Act of 1909, which deals with steel-framed buildings, has its clauses so drawn up as to impose certain maximum unit stresses and loads on various kinds of materials and foundations, and certain minimum floor loads for different classes of buildings, and its provisions in their final form (it will be remembered that several professional societies appeared in opposition to the Bill) may be said to represent the considered opinion of structural designers as to what limits ought to be insisted upon in the general interests of the Metropolis. Such limitations are in accordance with our habits in the United Kingdom, where we have for sixty years been accustomed to the Board of Trade rules in railway design, but regulations carried to such an extreme as those now under discussion would tend to stultify initiative, because it is a moral certainty that they will be strictly enforced in their exact literal meaning.

The proposed Regulations are contained in 160 clauses grouped into eleven parts in a systematic way which greatly facilitates an examination of them.

Part I., "General" (Clauses 1–5), is a clearly expressed definition of what is meant by a reinforced concrete building, and lays down the procedure to be followed in a designer's relations with the district surveyor. But Clause 5 should be modified so as to enable the designer to combine steel framing and reinforced concrete in one building if he so desires; a strict reading of this clause would not permit him to do so.

Part II., "Data" (Clauses 6-16), leads off with a dozen clauses bearing upon floor loads in practically the same terms as the 1909 Act. Next comes a clause about wind pressure which is quite different from that of the 1909 Act and gives 20 lb. per square foot for one set of calculations and 40 lb. for another set, while further on in Clause 107 it will be found that 30 lb. is to be used for each individual panel; yet all this complication would result in wind stresses almost identical with those got by the rule of the 1909 Act, which gave 30 lb. per square foot on the upper two-thirds of the exposed surface.

Then follow seven or eight folio pages embodying Parts III. and IV. (Clauses 45-79 and 80-102), and positively bristling with formulæ most of which are those adopted by the Royal Institute of British Architects in their "Second Report" published last year. . .

But all these pages of formulæ cannot quite cover the ground, and accordingly in certain cases (Clause 32) we are to fall back upon "the accepted formulas of modern engineering practice." Surely a reference to the R.I.B.A. Rules, *plus* the "accepted formulas," would be enough. It is difficult to see why there should be any more reason to introduce formulæ into a set of regulations for the use of reinforced concrete than would exist in the case of a steel-framed building, or a bridge for use in a public highway. In all these cases the services of a properly qualified man are required to draw up the design—and, it may be added, a properly qualified man to pass it—but any authority which attempted to issue formulæ in the two latter cases would make itself a laughing-stock to the engineering profession.

In the case of Pillars—Part IV.—the whole set of regulations are based on certain experimental results with the three types of pillars which are now generally adopted. The rules are certainly those which most men would follow for these three types, but Clause 88, which requires at least four lines of vertical reinforcement in a pillar, and Clause 90, which limits the diameter of a vertical rod to 2 inches, would block out, for example, the system referred to in *The Times* on January 24 last, because such a pillar as is there described would be relegated to the class of cylindrical steel pillars, and its working load would be merely that allowed by the 1909 Act. We are not yet anywhere near finality in the art of combining steel and concrete; every engineer knows that the crippling load of certain cross sections of steel pillars is considerably increased when they are encased in strong concrete, and this fact is largely made use of in America, where very tall buildings exist. In this country, however, the advantage of such additional strength is not so obvious, and since the 1909 Act regards the casing as merely a protection from fire, most designers use ordinary brickwork to surround their steel columns. But even ordinary stock brickwork adds considerably to the strength; for instance, a steel column to carry 200 tons is not infrequently placed in the heart of a 2 feet square brick pier, and if it were permissible to count on even five tons per square foot of brickwork, 10 per cent. would be added to the strength of the pillar, or alternatively 10 per cent. deducted off the area of the steel, while the pillar still remained of 200 tons strength.

It ought to be pointed out that Parts II. to IV. are not wholly taken up with the formulæ; a very large percentage of the clauses deal with practical points, such as the maximum distance between bars, thickness of covering concrete, jointing of bars, fishtailing of ends, grip length, shear reinforcement, etc., and are required in some form or other. In several cases, however, the description might be condensed considerably. What is required is "regulations" and not "specifications."

The tables of working stresses, which certainly are necessary in any regulations, are in some cases higher than those of the R.I.B.A. Rules. This is to be regretted, because in Clause 144 the district surveyor is invited to use a test load which in most cases would elongate the tension rods of a beam right up to the full stretch of the concrete, and in many cases would start cracks in it if the working stresses were up to the proposed limits—a state of things which can hardly have been intended.

Again, Clause 102, if read with Clause 132, would sanction a limiting compressive working stress of 2,400 lb. per square inch on the concrete of helically reinforced columns—a somewhat startling figure even with 1 : 1 : 2 concrete. Such stresses should not be encouraged in any building in London; they involve far too small a factor of safety, and a comparatively slight settlement might induce such stresses as would

lead to failure. Unless a building in London is carried down to the blue clay it is certain to have its foundations upon a more or less yielding substance, and such yielding substances very often induce unequal settlements, which, in addition to their effect on the pillars, upset calculations of beam strength when continuity is relied upon. For this reason many engineers will dissent from some of the formulæ given for beams with "fixed ends." . . . .

In Part VIII., "Materials" (Clauses 118–139), the first three sections, dealing with "cement," "sand," and "coarse material," are descriptive and represent good practice; but some parts of the "Concrete" and "Steel" section are open to serious criticism. Clause 132, *a* and *b*, in the "Concrete" sub-division, if it means anything at all, must be construed to mean that the various proportions of concrete given *will* have the ultimate stresses given in the table, and consequently a designer is invited to work on that assumption, which, combined with Clause 102, gives stresses very much higher than those generally adopted. It is notorious that compression tests on concrete vary to an unaccountable degree; how, then, can any one say that some particular 1 : 2 : 4 concrete will at the end of three months have a resistance of 2,400 lb. per square inch? It may have more if the sand and coarse material are very good, but if these ingredients are of moderate quality only it will very probably have less; yet the designer is here told that he can, with sufficient helical wound reinforcement, run up to 1,600 lb. per square inch for his working stress. Now, the district surveyor may test any work with 50 per cent. added to the superimposed load, and since the superimposed load is generally twice the dead load the test might put 2,133 lb. per square inch on the concrete of a particular pillar. Happily it would in practice prove impossible to test a main column to this extent.

Again, Clause 136 in the "Steel" subdivision permits the working stress of the tension bars in beams to go up to 20,000 lb. per square inch with steels of high ultimate tensile resistance such as are advocated by some designers; here again a district surveyor might impose a stress of 27,000 lb. per square inch if he tested the beam by the method he is invited to adopt, and such a stress would almost certainly crack the concrete on the underside of any beam.

The remaining three Parts, IX., X., and XI. (Clauses 140–160), which treat of "Tests and Testing," "Centring," and "Workmanship," are well expressed, although again they smack of "specification" rather than of "regulation"; they include the test loads already mentioned—*i.e.*, one and a half times the superimposed loads. No engineer would object to the magnitude of this test load on so discrete a substance as reinforced concrete, since the function of a test is to show whether work has been scamped or accidentally damaged during its construction, and if the stresses induced by the test are reasonably within safe limits no harm is done to sound work. When, however, the induced stresses run up to the extremes pointed out in this article the test may prove positively dangerous.

The conclusions suggested by an examination of the London County Council proposals is that they should be stripped of their formulæ entirely, and that their limiting stresses should be considerably lowered, unless they are made to apply to "test loads" instead of "working loads." If this were done the factor of safety would be much about the same as that of a steel-framed building under the 1909 Act, while the working stresses would be more in accord with those adopted by the men who have described their work in detail at the meetings of engineering societies.

Victoria and Albert Museum: Alfred Stevens's Drawings.

The Victoria and Albert Museum has recently acquired a considerable number of drawings and designs by Alfred Stevens from the collections made by two of his pupils, James Gamble and Reuben Townroe, both of whom died in the early part of 1911. These have now been mounted and labelled, and a selection has been placed on exhibition in Room 75, advantage being taken of the opportunity to rearrange the drawings by Stevens already shown there, which are now grouped according to subject throughout the gallery. Designs for the decoration of St. Paul's Cathedral form one of the most important sections of the exhibition, the various studies in red or black, chalk or pencil, being illustrated by tracings made by Townroe and Stannus of the completed designs. The designs and studies for the decoration of Deysbrook have also been brought together, and are now supplemented with several full-sized working drawings of details in colour, which have not before been exhibited. One of the most interesting of the new acquisitions in this class of work is a sketch in water-colour for the decoration of a staircase and landing of a public building. The Museum has acquired several early studies both of landscapes and from works by Old Masters, made by Stevens during his first visit to Italy, among them being small copies in water-colour of Titian's "Flora" and "Eleanore Gonzaga."

The collection also includes studies in black chalk for the decorations of Dorchester House, and designs for silversmiths' work, candlesticks, street lamps, pottery and stoves, as well as a large number of slight sketches of architecture and furniture and memoranda of subjects for figure compositions. The Museum now possesses upwards of 500 drawings and studies by this distinguished British artist; those not exhibited in Room 75 (or Room 48, where a series related to the Wellington Monument has been hung), being obtainable on application in the Students' Room (71) of the Department of Engraving, Illustration and Design.

Slade Professorship of Fine Art, Cambridge.

Mr. Edward Schröder Prior, F.S.A. [*F.*], has been elected Slade Professor of Fine Art in succession to Dr. Waldstein, resigned. The new Professor was born in 1852, and was educated at Harrow and Caius. He was distinguished as an athlete at Cambridge, and won the Amateur High Jump Championship in 1872. He was a pupil of Mr. Norman Shaw, R.A., and has been architect to Cambridge University, where he designed the building in which the present Medical School is housed, to Harrow School, and to Winchester College, and has built churches and houses in many parts of England. Mr. Prior was one of the founders of the Art-Workers' Guild, and has been

secretary of the Arts and Crafts (London) Exhibition Society since 1902. His publications include *A History of Gothic Art in England* and books on the Cathedral-builders and the mediæval figure-sculpture of England.

Obituary.

ALEXANDER GRAHAM, F.S.A. (*see* page 298).

THOMAS MILLER RICKMAN, F.S.A., Assoc.Inst C.E., F.S.I., who died on the 10th February, aged eighty-four years, had been an Associate of the Institute since 1854. He served some years ago on the Practice Standing Committee, and was for several years an Associate-Member of Council. He was the son of Thomas Rickman, F.S.A., the architectural essayist and author of the well-known *Styles of Architecture in England*. He was a leading member of the quantity surveyors' profession, and practised for over forty years in partnership with Mr. E. J. Burr, under the style of Rickman and Burr, architects and surveyors. He was President of the Architectural Association in 1854–55, and of the Surveyors' Institution in 1899. He was a Vice-President of the Architects' Benevolent Society, to the funds of which body he was a generous subscriber. Papers read at the Institute by Mr. Rickman and published in the TRANSACTIONS include "Metropolitan Improvements as affected by the Bills now before Parliament" (1859), "Professional Lessons from a Boulder" (1885), and "Specification Writing" (1889). In 1901 he published a volume entitled *Notes on the Life and Work of Thomas Rickman*. A memorial service on the occasion of the funeral took place at the Catholic Apostolic Church in Gordon Square, and was attended by Messrs. Paul Waterhouse [*F.*], Campbell Jones [*F.*], and Charles Blomfield [*F.*], and Mr. Waterhouse represented the Institute at the interment at St. Pancras Cemetery, Finchley.

CHARLES SMITH, *Fellow*, of Reading, died suddenly on the 6th February. His son, Mr. Charles Steward Smith [*F.*], writes: "He was in his eightieth year, and retained wonderful power of mind and body till the last. In recent years he gave most of his time to public voluntary work, although he remained a member of our firm and was at the office as usual the day before his death, which occurred at the Borough Bench just as he was about to take his seat as Reading's senior acting magistrate. As long ago as 1854 he joined the Institute as an Associate, becoming a Fellow in 1870, and all through the years remained loyal and true to its traditions." Having served his articles with Mr. W. F. Poulton, of Reading, Mr. Charles Smith became an assistant in London in the office of Mr. W. M. Teulon, starting practice in Reading in 1857. His early years were devoted largely to works on the estates of the late Duke of Wellington, Sir Francis Goldsmid, and Lord Eversley, in which connection he built many parish schools and did a few restorations, for instance, East Tytherley Church. Later he was employed by the Governors of Wellington College on several of the masters' houses, additions to the college buildings, etc. Several large houses in the neighbourhood of Kingston and Camberley were designed by him. In 1884 Mr. C. S. Smith joined his father in partnership. The firm has carried on a large and varied general practice; in Poor Law work, erecting new buildings or remodelling old ones at Reading, Henley, King's Lynn, Stratford-on-Avon, Wallingford, Easthampstead, Chipping Norton, Eton, Basingstoke, Hatfield, and Ware, in addition to public and educational works in many parts of the country. Mr. Smith actively associated himself with the public work of his town, and was for two years in succession (1874–76) elected to the Mayoral Chair. He will be remembered and honoured for the great part he played in giving to Reading its complete and excellent system of drainage. Mr. Smith leaves two sons in the profession, namely, Mr. Chas. Steward Smith [*F.*], of Reading, and Mr. John Arthur Smith [*F.*], of Basingstoke, and a grandson, Mr. L. Victor Smith, of Reading.

LEGAL.

Contract: Certificate: Progress and Final Certificates distinguished.

THOMAS FREE & SONS, LTD., *v.* SUTTON URBAN DISTRICT COUNCIL.*

Plaintiffs were contractors for the making up and laying out of a road, the total amount of the contract being £967. Part of that had been paid from time to time, and plaintiffs sought to recover a further sum of £270, for which it was contended the Council's surveyor had duly certified, which the Council denied. It was stated in the course of the hearing that the contract provided that while the work was proceeding the contractors should receive interim payments up to 80 per cent. of the total amount, in accordance with progress certificates given by the surveyor; that there should be a further payment up to 90 per cent. when the surveyor certified that the work had been completed; and that the remaining 10 per cent. should be held back for security during a period of maintenance following upon the completion of the work. The sum of £270 was an amount alleged to be due on the completion of the work so as to bring the payments up to 90 per cent. of the total amount of the contract, and it also included a sum for extras. In the statement of defence it was alleged that when the certificate was given the work had not been properly completed, that there was no justification for granting an interim certificate up to 90 per cent. of the contract amount, and that plaintiffs and the surveyor both knew when the certificate was given that the money was not due. It was contended also that the certificate was not, having regard to the terms of the contract, a final certificate, as that could only be granted after the surveyor had measured up and

* Reprinted by permission from the *Local Government Journal* of 10th February. A full statement of the facts and report of the evidence and counsel's arguments appeared in the *Sutton Herald* of the 16th December.

valued the work, which he had not done, and that a 90 per cent. certificate could not be given until the maintenance period began, in other words, until the work had been satisfactorily completed.

When the action was heard in the King's Bench Division Mr. Justice Lawrance expressed an opinion adverse to the plaintiffs on the question of law, but left two questions to the jury—(1) Whether, when the certificate was given, the amount was due under the contract, and (2) whether the surveyor or the contractors, when the certificate was given, knew that the sum was not due. The jury answered both questions in favour of the plaintiffs, that is to say, the first in the affirmative, and the second in the negative. This answer of the jury to the second question effectually disposed of any suggestion of fraud and collusion on the part of the contractors and the surveyor—the latter had left the service of the Council since the granting of the certificate. Defendants, however, while alleging that the money had knowingly been made payable before it was due, disclaimed any suggestion of fraud.

Notwithstanding the jury's verdict in favour of the plaintiffs, Mr. Justice Lawrance directed judgment to be entered for the Council, on the ground that as the surveyor had not then expressed his approval of the quantity and quality of the work, the certificate was only a progress certificate, and therefore one that defendants were entitled to question, which they would not have been entitled to do in the case of a final certificate.

The defendants appealed.

In the Court of Appeal (Lords Justices Vaughan Williams, Kennedy, and Buckley) Lord Justice Vaughan Williams was of opinion that the certificate, though not in the nature of a final certificate, was yet, having regard to the terms of the contract, one on which plaintiffs could sue, as it had been duly given by the surveyor for work done. In the absence of fraud and collusion, which had been set up inferentially by the defendants, but had been directly negatived by the verdict of the jury, it was competent for plaintiffs to bring an action for the recovery of the amount for which the surveyor had certified, and the verdict of the jury was right and should be acted upon.

Another of the three members of the Court [Lord Justice Kennedy] being of the same opinion, it was decided by a majority to set aside the judgment of the Court below, and enter judgment for plaintiffs for the amount claimed, with costs.

Defendants were given time to consider the question of appealing.*

MINUTES. VIII.

At the Eighth General Meeting (Ordinary) of the Session 1911–12, held Monday, 19th February 1912, at 8 P.M.—Mr. Leonard Stokes, *President*, in the Chair; entered in the attendance-book the names of 23 Fellows (including 11 members of the Council), 35 Associates (including 1 member of the Council), 2 Hon. Associates, 14 Licentiates, and several visitors—the Minutes of the Meeting held 5th February 1912, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease of Alexander Graham, F.S.A., *Fellow*, formerly Hon. Secretary, and having referred to his numerous services to the Institute as a Member of the Council and of various Committees, at the request of the President read a letter from Sir Wm. Emerson, *Past President*, expressive of his appreciation of the high qualities of the deceased member: whereupon, on the motion of the Hon. Secretary, it was

> RESOLVED, That the Institute do record its profound regret at the loss it has sustained by the death of its esteemed Fellow, Alexander Graham, F.S.A., and do express its sense of appreciation and gratitude for the long and eminent services he had rendered the Institute as Vice-President, Hon. Secretary, Member of Council, and in other capacities. Further, that a message be addressed on behalf of the Institute to Mr. Graham's near relatives, sympathising and condoling with them in their bereavement.

The Hon. Secretary further announced the decease of Thomas Miller Rickman, F.S.A., *Associate*, formerly Associate Member of Council and member of the Practice Standing Committee, and it was resolved that the regrets of the Institute be recorded on the Minutes, and that a vote of sympathy and condolence be passed to his relatives.

The decease was also announced of Charles Smith, of Reading, elected *Associate* in 1854, *Fellow* in 1870; and William King Lucas, *Associate*, elected 1881.

The following Members and Licentiates, attending for the first time since their election, were formally admitted by the President, viz. George Hastwell Grayson, *Fellow*, John Norman Keaseley, *Associate*, Ronald Potter Jones, Thomas Tyssen Grey Donaldson-Selby, *Licentiates*.

The Secretary announced that the following candidates having been found eligible and qualified under the Charter and By-laws had been nominated by the Council for election as Licentiates, viz., Matthew Adam, Glasgow; Rodney Howard Alsop, Melbourne; Arthur Godwyn Andrew, Cheadle Hulme; Beaumont Ellis Atkinson, Jun.; Lawrence Ashton Box, Bombay; Arthur George Bradshaw, Lancaster; Thomas Brameld, Singapore; Thomas Bloomfield Sadlier Brereton, Warlingham; Reginald Butler Brierley, Bedford; Cuthbert John Brodrick, Invercargill, New Zealand; F. Anstead Browne, Ipswich; Charles Ogilvie Campbell, Chester; William Edward Careless, Montreal; Benjamin Chaikin; Ernest Austin Collett, Sledmere, York; George Collins, Oldham; Norris Tynwald Cowin, Pretoria; Wilfrid Joseph Cummins, Manchester; John Eagle, Manchester; James Morris Heber Gladwell, South Woodford; James Gorman, Kedah, Malay Peninsula; Douglas Hall, Huddersfield; John Henry Harvey, Melbourne; Montague John Heir, Johannesburg; Arthur Edward Henderson; Gilbert Higginbottom, Manchester; James Jennings, Ambleside, Westmoreland; Gerald Edgar Jones, Epsom, N.Z.; Charles William Davies Joynson, Darlaston; Arthur Vernon Kislingbury; John Forsyth McIlwraith, Cambridge; Charles James McNair, Ayr; Frank M. Miles, Chigwell; Stanley Charles Miles, Bournemouth; Walter Guy Molesworth, Madras; Cecil Herbert Morgan, South India; John Myers; Edward Osbourn, Pietermaritzburg; Arthur Raymond Pratt Piercy, Stone, Staffs; Douglas Warren Pollock; Arthur Richard Quarterman; J. F. G. Roberts, Wellington, N.Z.; Alan Keith Robertson, Edinburgh; Hubert C. Sands; Herbert Reginald Saxty; Frederick Robert Edwin Sladdin, Rondebosch; J. Roxburgh Smith, Quebec; Herbert Athill Stallwood, Singapore; Edward Stockwell, Basingstoke; Leslie Tanner, Brighton; Francis Robert Taylor; Alexander Caldwell Thomson, Ayr; John Egerton

* The time expired on the 31st January, when the Council decided not to appeal.

Thorpe, Oxford; Alexander Cameron Todd, Montreal; Richard Arthur Waite, Bradford; Israel Walker, Dorking; Noel Huxley Waller, Cheltenham; Robert Elliott Walton; Leslie Elliot Williamson; Francis Arnold Winder, Sheffield; William Armour Arbuckle, Rutherglen; Larmont Douglas Penman, West Kilbride; Francis George Glyn Robertson, Glasgow; William John Wright, Glasgow.

Mr. Edward Warren [*F.*] having read a Paper on COLLEGIATE ARCHITECTURE, illustrated by lantern slides, a discussion ensued, in which Mr. Basil Champneys, Professor F. M. Simpson [*F.*], T. G. Jackson, R.A., the Rev. T. B. Lock, and Mr. Aymer Vallance took part, and a vote of thanks was passed to Mr. Warren by acclamation.

The proceedings then closed, and the meeting separated at 10.30 p.m.

SPECIAL GENERAL MEETING, JANUARY 8.

The Institute and the Society of Architects: Draft Agreement: Discussion.

The proceedings at the Special General Meeting of the 8th January convened by the Council to consider the draft Agreement proposed to be made between the Royal Institute and the Society of Architects were briefly recorded in the Minutes of the Meeting published in the JOURNAL of the 13th January. It remains to publish the document itself and to report the discussion which took place thereon.

The objects of the Meeting were set out in the Notice-Paper as follows:—

To consider the draft Agreement proposed to be made between the Royal Institute and the Society of Architects and which will be submitted to the Meeting for its approval, and in the event of the same being approved either with or without modification to pass the following Resolution:—

RESOLVED, that the Agreement proposed to be made between the Royal Institute and the Society of Architects and which is now submitted to this Meeting be and the same is hereby approved And that the President be authorised to sign the same on behalf of the Royal Institute And that after the same shall have been signed by both parties the Council do proceed to carry the same into effect and do present a Petition to His Majesty's Privy Council praying for the grant of a Supplemental Charter with By-laws in the form set out in the Second Schedule to the said Agreement as now approved.

The following is the Agreement above referred to:—

An Agreement made the day of One thousand nine hundred and BETWEEN THE ROYAL INSTITUTE OF BRITISH ARCHITECTS (hereinafter called "the Royal Institute") by the President of the Royal Institute for and on behalf of the Royal Institute of the one part and THE SOCIETY OF ARCHITECTS Founded 1884 (hereinafter called "the Society") by the President of the Society for and on behalf of the Society of the other part WHEREAS the Council of the Royal Institute and the Council of the Society have considered and discussed the principles of a Bill for the Registration of Architects and have embodied such principles in the draft Bill set out in the First Schedule hereto and the said draft Bill has received the approval of meetings of the Royal Institute and the Society respectively AND WHEREAS the Council of the Royal Institute and the Council of the Society have also considered and discussed proposals for the admission of the members of the Society into the Royal Institute which proposals are embodied herein and in the draft Supplemental Charter and By-laws set out in the Second Schedule hereto AND WHEREAS a draft of this Agreement has been submitted to and approved at a meeting of the Royal Institute held on the day of One thousand nine hundred and and at such meeting a resolution was passed authorising the President of the Royal Institute to enter into this Agreement on behalf of the Royal Institute and a resolution was also passed authorising the Council of the Royal Institute to present a Petition to His Majesty's Privy Council for the grant of a Supplemental Charter and By-laws in the terms of the draft set out in the Second Schedule hereto AND WHEREAS a draft of this Agreement has been submitted to and approved at a meeting of the Society held on the day of One thousand nine hundred and and at such meeting a resolution was passed authorising the Council of the Society to enter into this Agreement.

NOW IT IS HEREBY AGREED as follows:—

1. AS soon as reasonably possible after the date of this Agreement the Council of the Royal Institute shall take all necessary steps for the presentation of a Petition to His Majesty's Privy Council in order to obtain a grant of a Supplemental Charter with By-laws in the form set out in the Second Schedule hereto at as early a date as possible.

2. AFTER the grant of the said Supplemental Charter the Royal Institute shall forthwith take all necessary steps and at all times thereafter use its best endeavours to procure the passing of an Act of Parliament for the Registration of Architects on the lines of the draft Bill set out in the First Schedule hereto.

3. FORTHWITH after obtaining such Supplemental Charter the admission of members of the Society to the Royal Institute in accordance with the said Supplemental Charter and By-laws shall be proceeded with and the Society shall at all times give to the Royal Institute all information in its possession in regard to the qualifications character and history of its members.

4. AFTER the admission of four hundred members of the Society to the Royal Institute the first Committee referred to in By-law 93 in the said Second Schedule and the first two additional Members of Council of the Royal Institute referred to in By-law 94 shall be appointed in accordance with those respective By-laws.

5. WHEN and so soon as four hundred members of the Society shall have been admitted to the Royal Institute and in any event not later than six calendar months after the date of the said Supplemental Charter the Society shall take all necessary steps for the winding-up and dissolution of the Society and the following provisions shall have effect:—

(*a*) There shall be two liquidators for such winding-up of whom one and his successor or successors shall be appointed on the nomination of the Council of the Royal Institute.

(*b*) The assets of the Society shall be applied in payment of its debts and liabilities and of the expenses of its winding-up and dissolution and any surplus shall be applied in accordance with its Articles of Association and if there shall be a deficiency the Royal Institute shall make good such deficiency.

(*c*) The Royal Institute shall provide appointments for the two senior members of the Society's salaried staff on terms which prior to the signing of this Agreement shall have been provisionally agreed between the Royal Institute and the parties concerned.

(*d*) All books and records of the Society relating to the qualifications character and history of members of the Society shall be handed over to the Royal Institute on the dissolution of the Society.

6. NO election to membership of the Society shall take place after the date of the grant of the said Supplemental Charter.

7. IF the grant of the said Supplemental Charter be not obtained within twelve calendar months after the date hereof or within such extended period not exceeding eighteen calendar months from the date hereof as the two Councils may agree either party hereto may rescind this Agreement.

8. IN the event of any difference of opinion arising between the Royal Institute and the Society or between their respective Councils as to the interpretation of this Agreement or as to the procedure for carrying out this Agreement or as to any matter or thing arising thereout the matter in difference shall be referred to Mr. Leonard Aloysius Scott Stokes (or failing Mr. Stokes a substitute elected by the Council of the Royal Institute) and Mr. George Edward Bond (or failing Mr. Bond a substitute elected by and from the six representatives of the Society who will be members of the Committee referred to in By-law 93) whose decision in the matter shall be final and binding on all parties. If Mr. Stokes or his substitute and Mr. George Edward Bond or his substitute fail to agree in the matter under consideration they shall be joined by a third arbitrator to be nominated by the President of the Local Government Board and the decision of the majority of the three arbitrators shall be final and binding on all parties.

AS WITNESS the hands of the said and the day and year first above written.

The First Schedule.

DRAFT BILL FOR THE REGISTRATION OF ARCHITECTS.

After a suitable Preamble :—

1. The Architectural Registration Authority shall between the Royal Institute and the parties concerned.

British Architects with the addition of nominees of the Privy Council.

2. The term Architect shall mean every person who is now or in the future shall be enrolled on the Register as a Fellow Associate or Licentiate of the Royal Institute of British Architects or an Architect Member of the Royal Academies of Arts of England Ireland or Scotland.

3. Every Architect in the United Kingdom, Colonies or Dominions shall be entitled to be entered on the Register as soon as he is elected to one of the classes of Fellows Associates or Licentiates of the Royal Institute of British Architects or to architectural membership of one of the aforesaid Royal Academies in manner provided by the Royal Charters.

4. After 1920, except as provided in Clause 7 hereof, no person shall be permitted to practise for hire or reward in designing a building, and certifying payments in respect of the erection thereof, unless he is an Architect within the definition of this Act.

5. An Architect, unless he be a salaried official, shall be entitled to be remunerated for his services according to a scale of fees and charges to be approved from time to time by His Majesty's Secretary of State for the Home Department.

6. From and after a date which shall be five years after the passing of the Act, every County or Borough Council and Corporation of a City or Borough, Rural or Urban Council, Board of Guardians, Highway Board, School Board, Bench of Magistrates, and any other public Board, Committee or Trust elected, delegated or appointed by the public, and acting in an administrative, executive, or fiduciary position, who shall hereafter erect or shall alter the exterior of any building facing any road or open space at a cost exceeding £1,000 out of funds supplied or provided by public grants, rates or other assessments, shall employ and appoint an Architect as herein defined to design, under the instructions of the employers, and to supervise the erection or alteration of the said building, and to certify any payments to be made in respect thereof. Provided that the employer shall have power for sufficient cause to dismiss the Architect and from time to time appoint another Architect in his place.

7. In the case of bridges, railway or tramway stations, or similar buildings within the civil administrative limits of any city, borough or village, which are primarily of an engineering character they shall employ and appoint an Architect to collaborate with the Engineer in the design and supervision of the façade or exterior of the said buildings.

Provided always that this section shall not apply to the erection outside the aforesaid limits of any building by any Railway, Dock, Gas, Water, Electric, or other Company of any factory, shed, workshop, or other similar building for the carrying out of which it is usual to employ an engineer appointed by the said Company.

8. Nothing contained in this Act shall apply to the prejudice of any person who, previous to the passing of this Act, shall have been engaged in practice in designing or superintending buildings. Nor shall it affect the function and practice of any Engineer as such except as in Clause 6.

The Second Schedule.

DRAFT SUPPLEMENTAL CHARTER AND BY-LAWS.

George the Fifth by the Grace of God of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas King Defender of the Faith TO ALL TO WHOM THESE PRESENTS SHALL COME GREETING :

WHEREAS His late Majesty King William IV did by Royal Charter of Incorporation (hereinafter called "the Original Charter") dated the eleventh day of January One thousand eight hundred and thirty-seven grant and declare that Thomas Philip Earl de Grey and such other persons who were then members of the Society therein mentioned or who should at any time afterwards become members thereof should form one body politic and corporate for the purposes recited in the Original Charter under the name of The Institute of British Architects with Perpetual Succession and a Common Seal AND WHEREAS the Original Charter contained further provisions for the constitution and management of the said Institute and its affairs AND WHEREAS on the eighteenth day of May One thousand eight hundred and sixty-six Her late Majesty Queen Victoria was graciously pleased to command that the said Institute should thenceforth be styled The Royal Institute of British Architects (hereinafter called "the Royal Institute") AND WHEREAS Her said Majesty did by Her Royal Charter dated the twenty-eighth day of March One thousand eight hundred and eighty-seven (hereinafter called "the Supplemental Charter of 1887") grant declare and ordain

that certain provisions of the Original Charter should be repealed and that the Royal Institute and the property thereof should be thenceforth administered in conformity in all respects with the Supplemental Charter of 1887 and the By-laws made or to be made thereunder AND WHEREAS His late Majesty King Edward the Seventh did by His Royal Charter dated the eleventh day of January One thousand nine hundred and nine (hereinafter called "the Supplemental Charter of 1909") grant declare and ordain certain provisions with regard to the election of Licentiates and the qualification for Fellowship and the certificates of membership and the educational functions of the Royal Institute AND WHEREAS a Humble Petition has been presented to Us on behalf of the Royal Institute setting forth among other things that it is expedient to make such provision in regard to the admission to the Royal Institute of Members of "The Society of Architects Founded 1884" as hereinafter contained.

NOW THEREFORE WE having taken the said Petition into Our Royal Consideration and being desirous of furthering the Gracious Intent of Our Royal Predecessors and of promoting the advancement of the interests of the Royal Institute have willed granted and declared and We by Our Prerogative Royal and of Our Especial Grace Certain Knowledge and Mere Motion by these presents for Us and Our Royal Successors do will grant declare and ordain as follows (that is to say) :—

1. NOTWITHSTANDING anything contained in Our above recited Charters or in the By-laws of the Royal Institute such of the Members (other than Honorary or Retired Members) of "The Society of Architects Founded 1884" (hereinafter called "the Society") as shall be eligible under and satisfy the requirements of the By-laws contained in the Schedule hereto shall become and be admitted Fellows or Associates or Licentiates (as the case may be) of the Royal Institute in accordance with the said By-laws.

2. THE By-laws contained in the Schedule hereto shall be additional By-laws of the Royal Institute and shall be read with the existing By-laws of the Royal Institute and shall continue in force until altered varied or repealed in manner provided by the Charters and By-laws of the Royal Institute for the time being.

3. THE Council of the Royal Institute shall have power to guarantee out of the funds of the Royal Institute the payment and discharge of the liabilities of the Society so far as the property and assets of the Society are insufficient for that purpose.

AND WE do also will and ordain that subject to the provisions contained in this Our Charter the Original Charter so far as unrepealed and the Supplemental Charters of 1887 and 1909 respectively shall have full effect and validity and We do hereby confirm the same accordingly.

IN WITNESS whereof We have caused these Our Letters to be made Patent. Witness Ourself at the day of One thousand nine hundred and in the year of our Reign.

BY-LAWS.

84. Any Member of the Society of Architects Founded 1884 (hereinafter called "the Society") who at the date of the Supplemental Charter of 191– had attained the age of 30 years and had for the 10 years immediately preceding that date been engaged as a Principal in the practice of Architecture and who is recommended by the Council of the Society for admission to the Royal Institute as a Fellow, such recommendation being supported by not less than nine members of the Council of the Society if less than twelve be present and vote thereon at the meeting of the Council at which such recommendation is passed or by not less than three-fourths of the members present and voting if twelve or more be so present and vote, shall, subject only to his complying within a period of four calendar months after the said date with Sub-clause (*b*) of By-law 89 (but without examination or election), become and be admitted a Fellow of the Royal Institute : Provided always that not more than 100 Members of the Society shall be admitted under this By-law.

85. Any Member of the Society who at the date of the Supplemental Charter of 191– had attained the age of 30 years and had for the 7 years immediately preceding that date been engaged as a Principal in the practice of Architecture shall, subject to his complying within a period of two calendar months after that date with By-law 89 (but without election), become and be admitted a Licentiate of the Royal Institute, and thereupon if he shall desire to become a Fellow of the Royal Institute and shall forward to the Secretary of the Royal Institute the statement referred to in By-law 1 he shall be entitled to present himself at any of the examinations held by the Royal Institute in pursuance of By-law 7 for the examination of Licentiates who desire to become Fellows of the Royal Institute and on his passing such examination his name shall without any other formality be submitted for election by the Council of the Royal Institute as a Fellow at a meeting of the Council of which notice shall have been given in accordance with By-law 12 and if at such meeting he receive an affirmative vote of two-thirds of those present and voting and in any case of not less than twelve he shall subject to his complying with Sub-clause (*b*) of By-law 89 become and be admitted a Fellow of the Royal Institute.

86. Any Member of the Society who at the date of the Supplemental Charter of 191– had attained the age of 30 years and was otherwise eligible to become a Licentiate of the Royal Institute under Clause 1 of the Supplemental Charter of 1909 shall without election but subject to his complying within a period of two calendar months after that date with By-law 89 become and be admitted a Licentiate of the Royal Institute.

87. Any Member of the Society who at the date of the Supplemental Charter of 191– had attained the age of 28 years and who on attaining the age of 30 years shall be otherwise eligible to become and shall desire to become a Licentiate of the Royal Institute shall within a period of two calendar months after attaining the age of 30 years comply with Sub-clause (*a*) of By-law 89 and unless within a period of two calendar months after such compliance a complaint in writing as hereinafter mentioned be made against him he shall without election but subject to his complying with Sub-clause (*b*) of By-law 89 become and be admitted a Licentiate of the Royal Institute : Provided always that if a complaint in writing be made to the Council that such Member of the Society has at any time after the date of the Supplemental Charter of 191– conducted himself in a manner derogatory to his professional character or engaged in any occupation inconsistent with the profession of an Architect or been convicted of a felony he shall not become a Licentiate without election but the Council shall proceed to investigate such complaint in the manner provided by By-law 25 for the investigation of charges against Members of the Royal Institute : and after such investigation he shall be admitted to candidature for election by the Council in the ordinary way and if elected he shall subject to his complying with Sub-clause (*b*) of By-law 89 become and be admitted a Licentiate of the Royal Institute.

88. Any Member of the Society who at the date of the Supplemental Charter of 191– had passed the examinations necessary to qualify for membership of

the Society and who desires to become an Associate of the Royal Institute shall within a period of two calendar months after the date of the Supplemental Charter of 191– give notice in writing to the Secretary of the Royal Institute of such desire and thereupon he shall be allowed to present himself at a special examination in design only which shall be arranged by the Council of the Royal Institute and on his passing such examination and subject to his complying with Sub-clause (*a*) of By-law 89 (but without any further or other examination than as above), he shall be admitted to candidature for election by the Royal Institute as an Associate of the Royal Institute in accordance with the By-laws of the Royal Institute and if elected he shall subject to his complying with Sub-clause (*b*) of By-law 89 becomes and be admitted an Associate of the Royal Institute.

89. Every Member of the Society who desires to become and be admitted a Fellow Associate or Licentiate of the Royal Institute under the foregoing By-laws shall (except as otherwise expressly provided)—

(*a*) Make and obtain the necessary written Statements required by the By-laws for the time being of the Royal Institute and be proposed according to the usual nomination form of the Class to which he desires to be admitted and forward such documents to the Secretary of the Royal Institute and satisfy the Council that he is eligible according to the Charters and By-laws of the Royal Institute for the Class to which he desires to be admitted or elected : Provided always that the Council if satisfied as to his eligibility shall have power to nominate any such Member and to dispense with the separate written statement required to be made by one of the proposers as provided by By-law 3 :

(*b*) Sign the Declaration and pay the entrance fee and annual subscription or annual contribution, as the case may be, required by the By-laws for the time being of the Royal Institute : Provided nevertheless as follows :—

(i) the Declaration to be made by a Member of the Society who becomes a Fellow of the Royal Institute under By-law 84 shall contain a statement that he has been engaged as a Principal in the practice of Architecture for at least ten years immediately preceding the date of the Supplemental Charter of 191– :

(ii) a Member of the Society who becomes a Fellow or Associate of the Royal Institute during the year 191– shall only be required to pay an Entrance Fee of £2 12s. 6d. if he becomes a Fellow or £1 11s. 6d. if he becomes an Associate and shall not be required to pay any subscription for that year; and a Member of the Society who becomes a Licentiate during the year 191– shall only be required to pay a contribution of 10s. 6d. for that year.

90. Students of the Society on making written application to the Council of the Royal Institute within two calendar months after the date of the Supplemental Charter of 191– shall become Students or Probationers of the Royal Institute according to age and qualification as may be determined by the Council of the Royal Institute.

91. The Council of the Royal Institute shall exempt from examination in any particular subject or subjects at any examination for candidates for Associateship of the Royal Institute held at any time hereafter under By-law 2 any Student of the Society who at the date of the Supplemental Charter of 191– held the Society's Certificate that he has passed in such subject or subjects at the Society's examination for Membership of the Society or any Certificate which would exempt him from examination in such subject or subjects at the Society's examination.

92. The Council of the Royal Institute shall have power in any special case to extend any period prescribed by By-laws 84, 85, 86, 87, 88 and 90 for the doing of any act thereunder.

93. (*a*) There shall be a Committee of the Royal Institute for the promotion of the Registration of Architects and for the consideration of all legislation affecting the Registration of Architects.

(*b*) Such Committee shall consist of 16 Members of the Royal Institute of whom 10 shall be persons who at the date of the Supplemental Charter of 191– were not Members of the Society and 6 shall be persons who at that date were Members of the Society.

(*c*) The Members of such Committee shall be appointed annually by the Council of the Royal Institute at the first Council Meeting after the 30th June and shall continue in office until the last day of the following June : Provided always that the first Members of such Committee shall be appointed by the Council of the Royal Institute as soon as reasonably possible after the date of the Supplemental Charter of 191– as to ten of such Members from the Members of the Royal Institute and as to the remaining six of such Members on the nomination of the Council of the Society from the Members of the Society and shall hold office until the following 30th day of June.

(*d*) Occasional vacancies in such Committee may be filled by the Council of the Royal Institute at any time.

(*e*) Such Committee shall conduct its business in accordance with the provisions of By-laws 52, 53, 55 and 56 so far as the same are applicable as though such Committee were a Standing Committee.

(*f*) Such Committee shall be dissolved as and when a Royal Charter or an Act of Parliament or other provision for the Registration of Architects approved by the Council of the Royal Institute shall have been obtained or passed or made : And such Committee may be dissolved at any time after the year 1920 by the Council of the Royal Institute if the Committee shall pass a resolution to that effect supported by three-fourths of the Members of the Committee present and voting thereon : And if the Committee be so dissolved this By-law No. 93 shall cease to have any operation and effect.

94. Until such time as the Committee referred to in By-law 93 shall be dissolved there shall be two additional Members of the Council of the Royal Institute to represent those Members of the Royal Institute from time to time who at the date of the Supplemental Charter of 191– were Members of the Society : such two additional Members of the Council shall be nominated by the Council of the Royal Institute from the six Society Members of the Committee referred to in By-law 93 and shall be elected at the same time and in the same manner and shall hold office subject to the same conditions as other representative Members of Council : Provided always that the first two additional Members of Council under this By-law shall be appointed by the Council of the Royal Institute on the nomination of the Council of the Society as soon as reasonably possible after the date of the Supplemental Charter of 191– and such first two additional Members of Council shall hold office until the other representative Members of Council then in office shall go out of office.

WITNESS to the Signature of the President of the Royal Institute of British Architects

WITNESS to the Signature of the President of the Society of Architects founded 1884

Notes for the Information of Fellows and Associates.

N.B.—1. In submitting the above proposals to the General Body the Council have also decided to lay before them the statement of policy which follows these notes.

2. The Special General Meeting, the objects of which are detailed above, is one at which all members—that is, Fellows and Associates—are entitled to speak and vote upon the Resolution before the meeting.

3. Under the provisions of By-law 67 there must be 50 members present at the meeting, of whom at least 40 must be Fellows, and the Resolution must be supported by a majority consisting of two-thirds of the members present having a right to vote and voting thereon.

4. The Council are advised that the Resolution does not require confirmation at a subsequent General Meeting.

5. It is the wish of the Council that the General Body should have the fullest opportunity for discussing the Resolution and giving it the most exhaustive consideration, and arrangements have been made for adjourning the meeting at 10 P.M., and continuing the discussion on Monday, January 15th, at 8 P.M., if the majority of those attending the meeting desire that this course should be adopted.

STATEMENT OF POLICY.

18th December 1911.

1. In submitting to the General Body a proposal to apply for a new Supplemental Charter with By-laws to enable the Royal Institute to admit the members of the Society of Architects, the Council have considered it advisable to lay before the members a short statement in explanation of the policy which they have been instructed to carry out, and of the means which they propose to adopt in order to give effect to it.

2. For this purpose it is necessary briefly to recall to the minds of members the past history of the subject.

3. In March 1907 a long discussion on the subject of the Registration of Architects, which had largely engaged the attention of the Royal Institute for some years, was brought to a close by the *unanimous adoption* at a Special General Meeting of a complete programme of policy.

4. Since that date it has been the business of the Council to carry out that programme, step by step.

5. Briefly, the programme adopted in 1907 included the following progressive steps :—

(*a*) To draft and obtain the consent of the Privy Council to a new Charter, empowering the Council to elect Licentiates, abolishing direct election to Fellowship (except in special cases), and instituting a compulsory architectural education for future members.

(*b*) To draft new By-laws for carrying this Charter into effect.

(*c*) To enrol all qualified architects in the class of Licentiates.

(*d*) To prepare and pass through Parliament a Bill conferring statutory recognition on the members and Licentiates of the R.I.B.A., and legalising the Scale of Charges.

6. The Council have lost no time in carrying this programme into effect. (*a*) and (*b*), the new Charter and the new By-laws, were completed in 1909 and 1910 respectively. (*c*), the enrolment of Licentiates, was commenced early in 1910, and at the present date nearly 2,000 architects have been enrolled.

7. But in endeavouring to complete (*c*), the enrolment of all qualified architects, and to effect (*d*), the preparation and passing of the Act, the Council were faced by the attitude of the Society of Architects. This body, founded 27 years ago, mainly for the purpose of advocating the policy of Registration, had in the interval become a powerful and firmly established institution, numbering close on 1,000 members. Clearly the independent existence of this body made it necessary for it to discourage (*c*) and to oppose (*d*), while at the same time pressing its own Bill, which gave only an insignificant place and powers to the R.I.B.A.

8. The opposition of the Society would necessarily have left (*c*) incomplete and rendered the success of (*d*) very improbable.

9. In this situation it seemed to the Council that the only means of carrying out the policy laid down by the General Body of members was to open negotiations with the Society of Architects with a view to obtaining their support for a Registration Bill prepared by the Royal Institute. This would practically involve the winding-up of the Society of Architects, as the main object of their separate existence would disappear, and accordingly some arrangement became necessary for the inclusion of the members of the Society of Architects in the Royal Institute.

10. A joint Conference was held between representatives of the Councils of the two bodies and a scheme was prepared under which the Society would be wound up and its members would be admitted to the R.I.B.A., on the understanding that the R.I.B.A. should press forward in Parliament the Registration Bill outlined in (*d*).

11. The Councils of the two bodies agreed to this scheme, and to the general principles of a draft Bill which had been prepared by the R.I.B.A. Council, and in April the two documents—the terms of the proposed arrangement with the Society and the draft Bill—were laid before General Meetings of both bodies for their approval.

12. The arrangement with the Society and the draft Bill were agreed to by a Resolution at the Special General Meeting of the R.I.B.A.

13. The R.I.B.A. Council were then advised by their Solicitors that the Royal Institute had not power under its existing Charters to carry out the arrangement which had been sanctioned by Resolution of the General Body.

14. The R.I.B.A. Council then appointed a Committee to suggest some means of dealing with the difficulty that had arisen; and this Committee, with the advice of the Royal Institute Solicitors, recommended the Council to apply for a new Supplemental Charter with By-laws to enable the arrangement to be carried into effect.

15. This proposal was approved by the Council of the R.I.B.A. and was discussed with the Council of the Society, who expressed their approval of it.

16. Finally the Council of the R.I.B.A. have summoned a Special General Meeting of the Royal Institute to consider the question of applying for a new Supplemental Charter with By-laws and of authorising the Council to enter into a conditional agreement with the Council of the Society of Architects. These documents—the draft Charter and By-laws and the form of Agreement—are printed on the notice paper convening the meeting.

17. It will be observed that some important alterations have been made in detail but not in principle in the proposals since they were last submitted to the General Body, and they are now, briefly, as follows :—

(i) A certain number of members of the Society, of acknowledged professional status, who have been in practice as principals for over ten

years, will be admitted as Fellows of the Royal Institute under By-law 84. This number cannot exceed one hundred.

(ii) Under By-laws 85 and 86 all the remaining members of the Society, who have the ordinary qualifications for the Licentiateship, will be admitted to the Licentiateship, and will then immediately, if they are otherwise qualified for the Fellowship, have an opportunity of taking a special examination and, if they pass it, of being admitted by the Council as Fellows. Those who do not so qualify will remain in the Licentiate class.

(iii) Under By-law 87 those few members of the Society who are between the ages of 28 and 30 will be admitted as Licentiates when they reach the age of 30.

(iv) Under By-law 88 members of the Society who have passed the Society's examination will be permitted to enter for a special examination which will qualify them for election as Associates. This provision applies to only a very small number of the members of the Society.

(v) Under By-law 90 students of the Society will be registered either as Probationers or Students of the Royal Institute according to their qualifications.

19. The Council trust that the preceding Statement will be considered by members to justify them in expecting that the General Body will endorse the policy which they approved in April 1911 and will enable the Royal Institute to enter into the proposed Agreement with the Society of Architects, and will leave the Council free to proceed at once with the Registration Bill which has been the main object of their policy since March 1907.

The PRESIDENT, in formally opening the proceedings, first read the notice convening the meeting, and went on to say that it was in no way the wish of the Council to hurry the consideration of this matter, nor to press the Meeting to pass the Resolution to be proposed that evening. If members considered that it would be detrimental to the Institute to give effect to the Council's proposals it was open to the Meeting to adopt or reject them as they thought fit. A year ago he might have attempted to persuade members to accept these proposals, but any little ambition he had then in regard to this matter had now perhaps passed away. His only ambition at the moment was to conduct the present meeting fairly, and it would be his earnest endeavour to do so. But, as it would probably be a difficult meeting to conduct, he appealed to their generosity to assist him in the matter. Strictly speaking, with regard to the First Schedule, the Council were advised that that had already been passed by the Institute, and was therefore unalterable, though it might be rescinded. But the Council thought it would be well not to go too strictly on the legal aspect of the matter. If, therefore, it was considered advisable to alter that Schedule, he, as Chairman, would offer no opposition. The President then asked Mr. Gibson to propose the resolution.

Mr. J. S. GIBSON [*F.*], having formally read the resolution, said that probably all present had read the matter which had been printed with it on the notice-paper for the purpose of laying before members the policy of the Institute, which was now of some years' standing. We go back, he said, to 1906, when we first got some definite line of policy outlined, and which the Institute then determined should be followed. It was necessary that the vague feeling in connection with registration should at some time be crystallised, and towards 1906 and 1907 it was found possible to put all these aspirations or ideals into the form of certain definite proposals. These proposals were put before members in March 1907, and as it is possible that some present may not, in conjunction with the document now before them, have read the resolutions passed at that time, it would perhaps be as well to refresh their memory with those points which are really applicable to the present business. In March 1907 the following resolutions were approved: "That the Institute should endeavour to obtain Parliamentary recognition of its membership; That it be made compulsory after, say, 1912, that all architects, before receiving the Diploma of membership of the Institute, must have passed through a definite course of architectural education; That a temporary class of Licentiates of the R.I.B.A. should be established; That in future Fellows be elected from the class of Associates, and by the Council in special cases; That disciplinary powers of the Institute should be increased, with power of appeal." And as regards the application to Parliament for an Act, the following were suggested as the essential points which endeavour should be made to attain: To declare that it is in the public interest to enable the public to distinguish architects recognised as qualified by a competent authority from those not so recognised; To extend the present chartered privileges of the R.I.B.A., making it the statutory authority for the education and examination of architects for admission to the Institute; and to legalise a Scale of Charges. And there also followed a proposition, which was negatived at that meeting, to require public bodies to employ a professional member of the R.I.B.A. These are the chief heads upon which the policy of the Institute was based at that period, and these heads were elaborated by the General Body first, and then by the Council, and Committees were afterwards appointed to consider means of carrying that policy into effect. From that day till now the necessary steps have been taken, one after another, to give effect to that policy. It is common knowledge to all that a Supplemental Charter was obtained, By-laws were approved by the Privy Council, and the class of Licentiates was opened. That class has exceeded the utmost expectations of all who had anything to do with the initiation of this movement. The numbers at the present time are close upon 2,000, from all parts of the country, and the class of men who have come into the Institute is such that we may be quite satisfied with. After the policy of the Institute had thus far been put into operation, it became evident at an early stage that if anything was to be done by the Institute in the matter of a Registration Bill or a Bill for the Statutory Qualification of Architects, it would be necessary to take into account the fact that another Society in London, formed some 27 years ago for the specific purpose of bringing about the Registration of Architects, would have to be reckoned with. It was therefore thought desirable by the Council of the Institute that we should get into communication with that body as soon as possible, with the view of ascertaining whether there was any path which would lead to the desired end of both bodies, which would remove the friction that might exist between the two societies, and which would commend itself to the members of the Institute and the members of the Society of Architects. The result of this conference and these deliberations is laid before you to-night in the form of the Schedules and the Agreement now proposed. The Agreement and the draft Supplemental Charter now before you may be taken to be merely summaries of the First and Second Schedules which form part of the same document. It will probably be best to refer very

briefly to the Agreement, and to deal more in detail with the First and Second Schedules. There is very little to be said on the clauses of the Agreement; they are all perfectly clear, and practically explain themselves. With regard to clause 5, sub-section (*b*), which states that "the assets of the Society shall be applied in payment of its debts and liabilities and of the expenses of its winding-up and dissolution and any surplus shall be applied in accordance with its Articles of Association and if there shall be a deficiency the Royal Institute shall make good such deficiency," members may be sure that the Council of the Institute did not draw up such a clause as that without taking proper steps by means of its accountants to ascertain that that liability is practically non-existent, as far as any pecuniary liability is concerned. The Second Schedule deals with the conditions on which the Society of Architects is proposed to be dealt with in admitting its members into the various classes of membership of the Institute. Taking these in detail, and beginning with clause 84 of the proposed By-laws, you will find it is proposed that a certain proportion of the Society of Architects—the whole Society numbering close on 1,000 members—that a certain proportion of these members, not exceeding 100, are to be admitted into the Fellowship of the Institute on the terms therein set forth. This clause deals entirely with men who have been established for a long period in the profession of architecture, who have carried on reputable practices, and the Council of the Institute felt that it was better to throw the onus of making all the necessary investigations into the conduct and the standing of these men on the Council of the Society of Architects, rather than take over that responsibility, because the Council of the Society of Architects are in a better position to judge and form an opinion upon the character and standing of their members than we could ever hope to be. But it is hedged round with the necessity of getting a certain majority of votes, which, I think, will safeguard the Institute, as far as its membership is concerned. In By-law 85 we deal with a second class of members, the members of the Society who at the date of the Supplemental Charter have attained the age of 30 years and have for the 7 years immediately preceding that date been engaged as principals in the practice of architecture; it is proposed, subject to their making the necessary declarations, which you will find on the next page, that they shall be admitted at once as Licentiates of the Institute; and they shall, if they are eligible by reason of their practice and their age, immediately be elevated from the Licentiate rank into the Fellowship rank of the Institute by passing a special examination. Then we come to clause 86, which deals with those members of the Society of Architects who have attained the age of 30 years. They will become Licentiates of the Institute. There are also in the Society of Architects a comparatively small number of men who have not yet attained the age of 30 years, and therefore it was impossible for them to become Licentiates, as they were under the age-limit provided by the Supplemental Charter now existing, and some provision had to be made for them, so that when they did attain the age of 30 years they might be admitted into the ranks of Licentiates. And that is safeguarded towards the end of clause 87 by a proviso dealing with any person against whom a charge of felony or any other charge may be made between the interval of his being 28 years of age and his admission into the Licentiateship rank. There is also another provision in By-law 88 which deals with a certain number of members of the Society of Architects—not a large number, I think between 60 and 70—who have already passed certain examinations of the Society which are held to be equivalent to the examinations for the Associateship of the Institute; and it is proposed that these men should be exempt from those particular subjects, and that a special examination in design only should be set up for them, and if they successfully passed that examination they would then become eligible for election to the Associateship, and take rank with the Associates of the Institute. There are also some students whom it is necessary to take over on pretty equal terms to those of our own Students. They do not total a great many, but, as we are dealing with a Society of such a large membership as that now under consideration, it was necessary not only to take in their full members, but to take in all those who had in any way entered into an educational system with them. I do not think you will take any exception to the fact that these latter men are to be taken in on the lines suggested. Practically, the proposal, as briefly as I can state it, is this: that in consideration of our taking over the whole of the members of the Society of Architects on the terms outlined, we not only secure them and control them as members of this Institute, which is a very great benefit to us, but we get rid of the opposition which that Society would naturally bring to bear as a body formed for the purpose of carrying through the Registration movement. They have been very frank, and they have stated that if this Institute will really take up the movement of Registration, and will promote a Bill in Parliament to secure the statutory qualification of Architects, they will be only too glad to come within the walls of this Institute and to help us in every possible way. And I think it is entirely in that spirit that we must approach them and in which we must carry out these negotiations. They are giving up their individual existence, they are practically giving up everything for which the Society was constituted; they are not getting, probably, everything from us which they thought they might get—very few of us do get everything we think we ought to get in this world; but at any rate we have tried in these negotiations to find some means which would satisfy them and which would at the same time place the Institute in a position to approach Parliament with a reasonable chance of carrying this scheme still further forward. It is not necessary for me to go into detail over the remaining portions of these By-laws; they are largely legal provisions,—and provisions of moment, according to our solicitors' advice,—which do not touch the principle underlying those portions that I have already dealt with. Until we come to By-law 93, sub-section (*d*), there is not much to be said. It is proposed by By-law 93 that there shall be a Committee of the Institute for the promotion of the Registration of Architects and for the consideration of all legislation affecting the Registration of Architects. In clause (*b*) it says "Such Committee shall consist of 16 members of the Royal Institute, of whom 10 shall be persons who at the date of the Supplemental Charter were not members of the Society, and 6 shall be persons who at that date were members of the Society." The purpose of this clause was to give them a reasonable amount of representation on the Committee, so as to carry this work forward. And it is suggested that instead of the wording here adopted, it would be better to say 10 members of the Institute of whom 8 are Fellows and 2 are Associates, so that the Associates should be represented on this Committee. There is, I think, nothing further in connection with these By-laws which calls for comment; though I shall be very glad to give any further explanation needed. It is manifest that there must be a certain amount of opposition to any scheme of this kind; that is inevitable. You can-

not expect an Institute, with a membership as great as ours, not to have within its walls members who think, or fancy, or imagine they have certain grievances in carrying through such a great scheme as this. And one purpose of this meeting is to allow you to ventilate these grievances as much as possible, and I am perfectly certain that the Council will give every consideration to what you have to say. But it must be borne in mind that this is not a question of any personal predilection at all; it is a question of policy, and whether you, as individuals, take exception to any particular part of it, to any particular By-law or paragraph, I think you would be quite wrong to let your predilections or your prejudices override a great policy. We ought to look upon this from the point of view that we are members of an Institute which is going to last very much longer than we as individuals will last; and whenever a movement like this is instituted you will find that little injustices will be done to members, both old and young; it is inevitable it should be so. But the sooner you carry through a movement like this the sooner will all these injustices be relegated to the background, and in a very short time all these will have been forgotten; the Institute will have been very much strengthened, its work will be much more effective, and the reasons for its existence will really be justified in looking after the interests of architecture and of architects. It is, I think, unnecessary for me to tell you that it is surely very much better that all the architects of this country should be under the government of one head, rather than under two diverse heads. It would require very little argument to convince anybody that instead of working along lines that are divergent, all the architects of this country should work along lines which are not only parallel, but lines which are one, and it is only by giving away a detail which we ourselves might take some exception to that we can hope to bring two important bodies together and achieve such a result. We must not imagine for a moment that the Society of Architects has come here prepared to give up everything merely for our sakes, and we certainly must not approach them in that spirit. It ought to be the last thing we should do to make any sort of personal references, as to status, &c.; we ought to conduct this discussion on the lines that it is a movement from which the personal element must be entirely eliminated. Having finished with the Second Schedule, I should like to turn for a moment to the First Schedule. You will observe that the First Schedule really contains the principles of the draft Bill which it is proposed to lay before Parliament as soon as possible. Do not, however, run away with the idea that this is the Bill. The Bill, of course, will have to be drawn very carefully; all its provisions must be very carefully considered, I dare say by a Committee appointed for that purpose. Only the governing principles of the Bill are set out in the paper before you, and it is for the members of this Institute to determine those governing principles. If you wish them amended, let us know in what direction you would like them amended. If you wish them altered, extended or curtailed, it is for you to let us know as clearly as you can your mind upon the subject. Afterwards, I have no doubt, a Bill will be presented to you in detail, and you will have the same opportunity of discussing it in detail. Frankly, the Bill now before you goes considerably further than the resolution passed at the meeting in March 1907 which I read in opening my remarks. And if you compare the two resolutions you will see that the reason why this Bill goes further is two-fold. In the first place, some attempt was made to draft the heads of a Bill, the principles of a Bill, but up to the present no attempt whatever has been made to draft the Bill itself. Some time ago it was attempted to draft the heads of a Bill to embody the resolutions of March 1907, but we were assured by our solicitors that it was a practical impossibility to draft a Bill upon these resolutions; they were altogether too nebulous. Anything which it was proposed to achieve by means of a Bill containing only the provisions which I have read to you to-night could perfectly easily be obtained by means of our own By-laws, without going to the trouble of promoting a Bill in Parliament to obtain them. As one who has done some little work in the way of registration during the last five or six years, I claim to be at least a consistent registrationist since I took the movement up. If I understood anything at all of the debates which have taken place in this Institute, it has been that the members of the Institute did want a real Registration Bill; they did not want some nebulous shadowy kind of thing which would govern nobody, which would do us no good. What they meant by registration, I always understood, was that we should promote such a Bill as would practically enable us to control the whole of the architects in this country. And it was evident at a fairly early stage that the only practical method of obtaining that was in some such form as in the Bill that is now presented to you. I might briefly run through it. You will see, on page 3, clause 1, of the draft Bill that the Architectural Registration Authority shall be and mean the Council of the Royal Institute of British Architects with the addition of nominees of the Privy Council. We do not know what members the Privy Council might desire to put on the Registration Authority, but you may take it from the reading of that clause that the real governing authority, having control of the architects of this country, is the Council of the Royal Institute of British Architects. And it has required some considerable persuasion to bring the Society of Architects to that point of view. But there it is to-day, and I think we have got a long way towards establishing the Institute in the position which it ought to be in in relation to architects and architecture. The second clause, you will find, defines the term Architect, and it defines it so that an architect shall be a member of one or other of the classes of the Institute, or he shall be a member of any of the Royal Academies of Arts. In the third clause you will note that every architect in the United Kingdom, Colonies, or Dominions shall be entitled to be entered on the Register, subject, of course, to his being eligible by qualification. I draw your attention to the fact that this is not a compulsory Bill; it is a Bill in which the practising architect shall be entitled to be enrolled. But if a practising architect desires to remain outside the Institute, no compulsion will be placed upon him to become enrolled; he will be at liberty to continue his work until he dies, but he will not be at liberty to sell or otherwise dispose of his connection to an unqualified architect. He will be at liberty to continue his practice until he either relinquishes it or dies, the object being not to enrol all architects who have a vested interest in the practice of architecture, but only to enrol those who desire to become members of the Institute, and who see that it is to their interest that they should become members of the Institute. You will find in clause 4 that there is a time-limit: after 1920, or some time which it is politic to decide, no person shall be permitted to practise for hire or reward in designing a building unless he is an architect within the definition of this Act, which practically means that during the course of a few years every man who wishes to practise architecture in these Dominions

must of necessity be a member of this Institute, because it would not pay him to remain outside the Institute; it would be impossible for him to recover his fees in a Court of Law; he would have no standing whatever in the profession, and of necessity he would naturally come into the Institute. In clause 5 there is an exception made for architects who are salaried officials, and it also states that the Schedule of the Institute shall be taken to be the standard scale for the remuneration of architects. In clause 6 we have it stated that any public body or authority spending money out of the public funds for altering a building having a frontage to a public road shall employ an architect within the meaning of the Act. That, in another form, is practically achieving the same end as paragraph (i) in the resolution of March 1907 which was deleted—that is, to require public bodies to employ a professional member of the R.I.B.A. In clause 7 you have the collaboration of the architect and the engineer in certain works, such as bridges, railway work, and so on; and in clause 8 you have a governing clause without which it would be hopeless to expect any Parliament to give you an Act, viz., "Nothing contained in this Act shall apply to the prejudice of any person who, previous to the passing of this Act, shall have been engaged in practice in designing or superintending buildings." That proviso is, of course, inevitable. These, briefly, are the provisions of the suggested Bill. It is possible that many members of the Institute may have ideas which would better these proposals, or would modify them in a way which they think would be better. I think it is open to this meeting to listen to these, and I am perfectly certain we shall give them every consideration. It is also possible, in fact it is very probable, knowing human nature as we all do, that we shall have opposition to the first portion of the proposals of the Council as well as to the second, and it is common knowledge to us all that other proposals of various kinds have already been talked about. There have been alternatives suggested, such as making the Society of Architects an Allied Society of the Institute; but the gentlemen who promulgated that idea lose sight of some very important facts. The first is, our Allied Societies at the present time cover practically the whole of England, Scotland, Ireland, and Wales. The Society of Architects has a membership which also covers to a very great extent the same territory. If we allied the Society of Architects, they would have a certain number of members in the same town who were not members of the existing Allied Societies. It would get us no further forward in any matter of Registration; it would complicate and confuse the whole issue, and when you went to Parliament with a Bill, you would be compelled to take the Society of Architects, and on probably much worse terms than you can arrange today. Then it has been said that we should not go in for any scheme of amalgamation until we are perfectly certain we are going to get an Act. I quite agree that there is a good deal to be said for that. Probably those gentlemen who advance that proposition are under the impression that we shall never get the Act, and that it would be an impolitic thing for this Institute to—shall I say?—saddle itself with an additional membership of a thousand members in the futile hope that by doing so Parliament would therefore listen to us with more respect and grant our request. They probably think that, at any rate, if we never get this Act we need never amalgamate. But I think a little reflection will show you that the only possible way you can carry this through is the way in which you started when you decided practically to incorporate in this Institute all the architects of Great Britain, by instituting a new class. And I think it would be a disastrous step to turn your back upon that and to try now, at this late hour, to say because you will not make a special bargain with these men that you are going to throw all your work away, that you are going really to render the whole of your efforts of very little worth because you have to give up, shall I say, certain of your privileges to obtain their co-operation and support. That, I think, would be an extremely unwise proceeding, and I am perfectly certain that the gentlemen who are so cautious that they will not go forward with any step of amalgamation until they are perfectly sure that they are going to get a Registration Act from Parliament are very likely to be the gentlemen who will fall between two stools. No doubt there are many other forms of opposition to the proposals which the Council have put before you, but I will not take up any more of your time. As far as I possibly can I have tried to put as clearly before you as I am able the proposals of the Council, so that there will be no ambiguity in discussing it. And if anything that I have said in any way offends the susceptibilities of any member, I am extremely sorry, because I think we are here to discuss the matter in the most friendly way possible. It is not the slightest good discussing it in any other way. If we have to find a way out, let us find a way out with good humour. That will carry us over difficult country easier than anything else.

Mr. A. Needham Wilson [*A.*]: I think it is only right and proper that these proposals, having been moved by a Fellow, should be seconded by an Associate, because they affect the great component bodies of this Institute. But I must confess, in rising to second this, that I feel very deeply my sense of responsibility; partly because I do not claim to possess the eloquent language of my friend Mr. Gibson, nor do I feel that I have the grip of the subject that he has. But I feel my responsibility for a very much graver reason. It has been my privilege for some years to be an Associate Member of the Council. And as such, and in doing my duty, I feel that it has been incumbent upon me above everything else to watch over the interests of the Associates, as far as in me lay. I have endeavoured to the best of my ability to carry out that policy which I feel has been put upon me. Now, Sir, as Mr. Gibson has said, it is common knowledge that a great many of my brother Associates are opposing the proposals which are before us tonight, and that is where I feel my great responsibility, as one of their representatives on the Council, in rising to second this resolution. It has been my duty, as well as my privilege, to be behind the scenes, to a very large extent, in all these tangled and complicated negotiations which have brought us up to the present stage; and I venture to think it is only those who are behind the scenes who have the smallest conception of the difficulties and obstacles which have had to be met and surmounted. Therefore I have every confidence in seconding these proposals, because I honestly feel that the Council have arrived at the only possible solution under existing circumstances. I am bound to say that, in so far as the opposition of my brother Associates is an honest opposition, inasmuch as they may feel, and honestly feel, that their interests are likely to be imperilled, I confess I have a certain amount of sympathy with that view. And it is for this reason: the Associates have arrived at their position by dint of having to pass through very severe examinations. It is an extremely honourable position; it is a position that should not be assailed in any way.

If I felt that the proposals of the Council menaced the position of the Associates, I say, honestly and straightforwardly, that I should have been one of the first to oppose them with the full strength that I possess. But I do not feel that the position of the Associates is menaced. Now, Sir, I think that some of the opposition arises from a certain amount of misinformation, while some of it arises from an entirely different cause. And that is—one must confess it—that there is a certain amount of mistrust of the Council existing among the Associates. ("No, no.") I am glad to hear those noes, but at the same time I know that it exists. I should like to assure those gentlemen that that mistrust of the Council is entirely wrong. There seems to be an impression in many quarters that the Council are a collection of malevolent men—("No, no")—men whose sole aim and object—("No, no")—is to trample the interests of Associates under their feet. ("No, no.") Well, after the disclaimers which have issued from various parts of the room, I need not pursue that subject, but I should like to say that if that impression exists, it is entirely erroneous. Now, Sir, briefly, the Council, I take it, have a mandate. I think they have been doing their best to carry out that mandate. In doing so they have had to sweep away many obstacles. Obstacles are not swept away unless we can arrive at certain compromises. You have to compromise, whether you are dealing with a party wall dispute or whether you are dealing with matters of this kind; and you cannot compromise unless each side is prepared to give up something. I have had to ask myself in supporting these proposals certain questions as affecting Associates. One was, are we Associates called upon to pay too high a price for the ultimate object we have in view? I think if we are called upon to give up something, it is not to be measured against the ultimate good to the profession in general. It has been suggested to me that it would be a better policy if the matter were delayed. I cannot see the least object in delay, because I think if we are to take action in the matter, now is the time to strike, because we are very much before the public at the present moment. Further, I would remind those gentlemen who suggest delay that they have hampered the Council in taking such a course, because I think it would mean keeping open the class of Licentiates indefinitely. The Council in their wisdom recently extended the period for electing Licentiates, and got into serious hot water for so doing. So I think those gentlemen who make that proposal are on the horns of a very serious dilemma. Another suggestion which has been made is that the whole of these proposals are subversive of the dignity of the Royal Institute. I cannot see it. I see no dignity whatever in standing idle with my hands in my pockets waiting for the disabilities which hedge us round and interfere with our practice to disappear of themselves. I am anxious to go forward, I do not want to wait. I want those disabilities to be swept away, not only for my own sake, but for the sake of posterity. In conclusion, I should like to make, if I may be allowed to, an appeal to my brother Associates. They want to criticise, and criticism is welcome. I, as an Associate, can assure you that genuine criticism, genuine alternatives honestly put forward, will receive the most sympathetic consideration. It is wrong to think that the Council will not listen to the Associates and that they do not want to. I should like to take this opportunity of expressing my great appreciation to the Council for all the kindness I have received and the sympathetic consideration I have always had when I have advanced matters affecting Associates. But I would ask the Associates not to criticise this important matter in any spirit of factious opposition. If we are to have criticism, may I beg for it to be honest criticism? for I am perfectly sure the Council will consider it sympathetically, having in view what I am sure we all have, and that is the ultimate well-being of the profession.

Mr. C. Stanley Peach [*F.*]: After the lucid explanation of this Agreement which has been put to the meeting by the proposer and seconder, I feel it is not necessary for me to say very much before introducing the amendment which I feel bound to move. I have to propose, Sir, that this Agreement be referred back for further consideration. In the ordinary way, when a matter comes from the Council for the consideration and for the approval of the general body of members, it comes with the full force of the Council. As a rule, there have been steps leading up to it which have clearly indicated the feelings of the general body of members. Now, Sir, in the present case the general mandate is for registration. But on procedure there has not been a general mandate. The Agreement, as it now comes before us, contains what the general body of members regard as objectionable features. We do not consider them objectionable from any petty point of view of grievance, but on the broad principle that the Agreement as it stands is one which this Institute ought not to enter into. In the first place, we think that the inclusion of the full text—because it comes to that—of a bill to be presented to Parliament in an Agreement of this kind is open to very serious objection. There can be no question but that this Bill before it becomes law will receive considerable modification from time to time, and negotiations will have to take place concerning it. As it is made a consideration in the Agreement between this Institute and the Society of Architects the consent of both parties to any alteration is necessary. If from any cause there is a difficulty, then the arbitration clause of this Agreement will come into operation. And we consider that that is not a matter which should go to arbitration. It is a very difficult thing, when a Bill is under consideration, to have an arbitration concerning it, and therefore we think that the Bill should be excluded from this Agreement altogether, and that the most this Agreement should contain is a definite understanding that a Bill for Registration should be presented to Parliament by this Institute at an early date. That is our first objection. The next point that seems to affect the whole body of members is the fact that by this Agreement a new class, a privileged class, will be introduced into every grade of this Institute—Fellows, Associates, Licentiates. That is to say, persons recommended by the Society of Architects will become entitled to be members of this Institute; and if from any cause our Council should object to them, they will have the right of an appeal from the decision of our Council. That is a privilege which we, the general body of members, do not possess; also we think it is very objectionable that the Society of Architects should be entitled to come into this Institute in a way which cannot be extended to our Allied Societies, Allied Societies which have consistently supported Registration and the Institute right through. There are many other points which will be dealt with by other speakers, but I deprecate very strongly the idea that opposition is run on the lines that we have no confidence in our Council. That is not the case. In the strongly underlined reference and invitation to full discussion the Council are putting the responsibility for saying aye or nay to this Agreement on the general body of members. They give us the fullest information concerning it, and details which enable us to form our own judgment, and we are called upon to form our judgment, and the responsibility rests

upon us. And if we establish now a precedent for this method of negotiation, that precedent will be a very dangerous one when we have to meet the very real and very serious opposition which Registration yet has to encounter. What is this opposition and this rivalry of the Society of Architects? How will it appear to the Parliamentary Committee? On the one hand you have this Institute. We know what this Institute is; we have Royal Charters; we are the advisers of the King in the award of the most valued architectural honour in this country; we have wide examining powers; we have a strong financial position; and we have a very large membership, numbering, with the Licentiates, considerably over four thousand, and many alliances. Now, Sir, what chance would the Society of Architects have in opposing this Institute, or in proposing for a moment that they should be the Diploma Authority instead of this Institute? I do not believe that any Parliamentary Committee would consider that for a moment. They would stand no better chance than any of the numerous Societies which are allied to us. But there is other opposition which we have to encounter; and if we start by revolutionising our constitution in order to carry out an Agreement with a comparatively small number of people, how shall we further revolutionise when it comes to dealing with the powerful opposition of other Societies or public bodies. The Bill which here appears is one which, much as I should like to see it pass, I do not think will ever be passed in this form. It will require extensive modification, and that is the time when we may have to consider what alterations of our Constitution, or of our Charter even, are required, but not now. Therefore I have to propose as an amendment that this Agreement be referred back for that further consideration which the very important character of the subject requires.

Mr. Herbert Shepherd [*A.*]: On rising to second the motion of Mr. Stanley Peach, permit me to say that I feel my responsibilities very greatly. This is the first occasion upon which I have had the honour to voice the views of other members as well as my own, and I therefore ask this meeting's especial indulgence. I should like also, with your permission, to read, rather than to chance remembering my points. At the outset I think it should be made perfectly clear that whilst we are opposed in principle to the suggested agreement between ourselves and the Society of Architects, and are going to vote against the resolution of the Council which is before the meeting, we in no way give place to anyone in our respect and esteem first to you, Sir, as our President, and secondly to the members of the Council whom we have helped to elect to the offices which they enjoy. Believe me, gentlemen, this is not common lip-service but a genuine expression of our sentiments. For my own part, I fear that at times this Institute asks too much of its officers, and I feel sure that every one of us deeply regrets that your own health, Sir, should have been imperilled by the arduous services and laborious duties imposed upon you. At the same time I would ask that we shall be credited with being actuated by proper motives in our action in this matter, feeling as we do that this resolution is fraught with grave danger to the best interests of the Institute. I hope it will be admitted by all that whatever has been done was with the best of intentions and in all honesty of purpose. But, Sir, turning to the last paragraph on this paper, at the end of such a self-damaging statement as is there set out, one cannot help feeling that the Council are likely to compete very closely with our most Gracious Patron's Judges, both for innocence of affairs and unconscious humour. Let us turn back to clause 5, sub-section (*c*) of the Statement of Policy on the preceding page. I think in fairness that there should be added the words "For one year after obtaining the By-laws." That was the definite principle laid down by the general body. It would never have been possible to have adopted that proposal "*unanimously*" if members had been aware that there was to be inserted afterwards in the Charter a clause which had never received the sanction of the general body. I feel that we are in some dilemma with regard to paragraph 6 of this Statement, for after the word "enrolled" might be added "and signed a declaration in which for the first time in the history of the Institute the word 'surveyor' appears." This is a matter quite outside our Charters, and one which may be used, as Mr. Peach said, against us, and considered somewhat in the nature of poaching by another institution. With regard to the concluding sentence in paragraph 7, it is a fact that the Society did oppose and obstruct the enrolment of Licentiates of this Institute. I think, too, that a paragraph is missing between the fatal 13 (one sees this has to do with the law) and 14. The addition I suggest we might call 13a—viz. "That as the result of the last Council elections the Vice-President—whose absence from our Council no one regrets more than myself—most identified with the above proposals was rejected."

The President: I am sorry to interrupt you, Mr. Shepherd, but is this to the point?

Mr. Shepherd: I am discussing the Council's Statement of Policy, Sir. The two Fellows who were also members of the Society of Architects were at the bottom of the poll. The Associate who was also a member of the Society of Architects was not elected. I think this should have been some guide to the incoming Council as to what the general body thought with regard to the previous proposals. That is my point.

The President: Were there any other gentlemen at the bottom of the poll?

Mr. Shepherd: What I mean is that whereas the candidate at the top of the poll for membership of Council as a Fellow polled over 500 votes, the gentleman who is also a member of the Society of Architects found only 50 supporters. My point is this: that the general body, in the only way they could possibly express approval or disapproval of the proposals which had been recently before them, by the vote at the elections for the Council, definitely indicated their objection to the policy proposed. Now let us turn to the Agreement. We are in some difficulty here at once, for it takes two parties to make an agreement; and whilst we are informed by you that this Agreement may be approved "with or without modification," the other party have told their members that if these proposals are not passed in their present form, they will not be called together to deal with the matter. We think it would have been more in keeping with the position and dignity of this Institute if the Society had first been asked to agree to these terms. We should like to say something to the most ardent registrationists in this room. We firmly believe that should you by the cast of your vote carry this resolution tonight, you will put back the cause of registration which you have so much at heart. ("No.") I feel sure that if this resolution is carried, some of us will have to seriously consider whether we can properly remain members of the Institute. Others may not feel justified in taking so grave a step as to resign, but your Bill will stand in danger of being actively opposed from within your own body. What chance has such a Bill of ever becoming law? I would call the Meeting's attention to the fact that actually one of the officials of the body with whom you are proposing to amalgamate has definitely said that "A Registration Bill on the lines pro-

posed by the Institute has no more chance of becoming an Act of Parliament than he has of becoming Prime Minister." I think the Meeting will agree with him. We cannot believe that these gentlemen are aware of the facts of the case. Speaking in round numbers, there are at present close upon 7,000 practising architects in the United Kingdom. Taken together, the whole of the Fellows, Associates and Licentiates, and the members of the Society of Architects, number only about 2,500, leaving about 4,500 practising architects outside the two bodies. ("No, no.") I say *practising* architects, and if my figures are investigated, they will be found to be justified. How can you say, in the face of these figures, you are going to obtain by this Bill the registration of the whole profession? I beg to second the reference back of the motion upon the paper.

Mr. Horace T. Bonner [*A.*]: I have not heard one single fact put forward this evening against the proposal of our Council that we can treat as legitimate opposition based on broad principles against the great principle adopted by us in the year 1907. It will be a great pity for us to have dissentients within our own walls. I am speaking now as an old architect, as an old member of the Institute. I am sure that the opposition to the admission of members of another Society is what I may term a little factious, and is not in the best interests of the profession at large. The interests of the profession are mainly based on registration. When we get registration our status will be higher in the eyes of the public; and we shall eventually have better men join us. The title of architect even among newcomers is not hereditary, it will die out in time. It will be the same with us as it was with the members of the medical profession. When they obtained their Registration Bill they had to admit chemists, possibly quacks, and other so-called practitioners—and we shall have to do much the same, though I hope we have not many quacks in our profession. I do really think that if we could in some way bring about this amalgamation it would be very much better for the profession at large, and help to make the Institute stronger and more respected than it is now. If we want this Bill passed we must be unanimous, and we must have neither opposition inside our walls nor outside; we must have the whole of the profession properly represented. As to the discussion of the details of this Bill to-night, it is an impossibility. We are here to-night only to discuss broad principles. ("No.") Let us then enter into those broad principles with an open mind, and consider what is best not only for ourselves as Associates, but what is best for the Institute and for our noble profession. That is what I aim at doing. I have a proposal to bring forward with regard to Associates and their representation on the Council, but that will be a matter to discuss later when this big question is settled. I am sure that if the present proposals are agreed to, they will be found eventually to be beneficial, and especially to the younger men. I have therefore much pleasure in supporting the resolution.

Mr. Sydney Perks, F.S.A. [*F.*]: I have listened carefully to the interesting historical account of what has taken place, and I waited to hear the reasons why we should adopt this scheme. The account was very long and much in detail, but the reasons for its adoption were very few. The speaker and the seconder, with a child-like innocence which I envy, seemed to assume that if we made terms with the Society of Architects we could go on together united; we should get our Bill passed, and there would be an end of the matter. That assumption, I feel, is born of ignorance. There are two facts which we want to grasp to-night. The first is, that our Meeting has nothing whatever to do with the principle of Registration. Whatever your views may be for or against it, Registration has nothing to do with the business we are here to discuss, which is to sanction the admission into the Institute of the Society of Architects. That is all; it has nothing to do with Registration; we are going on with that, with or without the Society of Architects. It has been said that you cannot make omelettes without breaking eggs; but you must not make your omelettes with bad eggs. This is a very bad egg, and we do not want to swallow an omelette which is made with it. I think this matter is of most vital importance, particularly to the younger members of our profession—I do not think it affects the older members, because their positions are assured, they have honourable and big positions; the man who would suffer is the gentleman our President humorously referred to as the "under-strapper"; it is the young man we have to consider. The most important man in this room, from this point of view, is the latest Associate, not the President. With regard to this Bill and the possibility of getting it through Parliament it struck me that it would be a good plan to get the best opinion I could on that branch of this subject, so I obtained an introduction to one of the first, if not the very first, firm of Parliamentary Agents, Messrs. Sherwood and Co., of 22 Abingdon Street, Westminster, and asked them to report to me on the Bill. With your permission it would be better if I were to read the report to you rather than tell you what is in it. They report as follows: "We have now carefully considered the Draft Bill for the Registration of Architects which you have laid before us with reference to the points on which you desire our opinion. We do not think that the Bill would be allowed to proceed otherwise than as a public Bill. The distinction between public and private Bills is that the latter are applicable in respect of proposals affecting particular localities or the interests of particular persons or bodies; whereas the former are applicable to general legislation and matters which affect the community, or large classes of the community, as a whole. The most recent case on the question was that of a private Bill which was promoted by the Society of Apothecaries of London in 1910. The Society of Apothecaries acts under an old Charter and various Acts of Parliament amending that Charter, and the object of the Bill was to empower the Society to conduct examinations for the purpose of testing the fitness of persons to practise in dentistry and dental surgery, and to grant certificates of such fitness. This Bill was stopped at the outset by the Speaker, with whom the decision rests, on the ground, it is believed, that it was a matter affecting too large a class of the community to be dealt with by means of a private Bill. We are of opinion that a Bill which prohibits the practice as an architect by any member of the community unless he is registered by the Royal Institute of British Architects must fall within this ruling, and that therefore the Bill must be promoted as a public Bill. Public Bills may be introduced either by the Government of the day or by private Members of Parliament, and as we assume that this is not a matter which the Government would take up, it must be proceeded with, if at all, as a private Member's Bill. The right of priority in bringing in such a Bill is balloted for by Members at the commencement of each session, and it is only Members who obtain the first few places in the ballot who have the slightest chance of seeing their Bills placed upon the Statute Book. Nowadays, when the time of Parliament is so fully occupied, a private Member's Bill to which there is any appreciable amount of opposition has practically no chance of success, unless facilities for its passage

are granted by the Government, in the shape of extra time for debate, &c.—as, for example, in the case of the Small Landholders (Scotland) Bill of last session. We may mention that a private Member's Bill for the Registration of Nurses has been introduced on more than one occasion, but has never obtained the necessary facilities to enable it to proceed. When a private Member's Bill of the character proposed obtains a second reading, it is referred to a Committee, who hear evidence of parties interested. Counsel are not usually heard in such cases, so that the expense (providing the witnesses did not charge a fee) would be negligible. In fact, the only appreciable expense involved in connection with a private Member's Bill is that incurred in the drafting of the Bill and in printing and circulating statements in support of the proposals. With regard to the proposals of the Bill fixing the remuneration of architects according to a scale to be approved by the Home Secretary, we know of no precedent for any such provision, except in the case of certain legal charges where the work follows a regular course, and in consequence the fees can be fixed with some degree of exactitude, and a few cases where the services rendered are of a quasi-public character, as, *e.g.*, the case of the District Surveyors under the London Building Acts. With regard to the proposal requiring local and other public authorities to appoint architects to advise them in certain cases, this is, of course, quite unprecedented, and in our view would be very unlikely to succeed, as it would be opposed by the various Associations of Local Authorities. These Associations would be certain to see that their views were strongly represented to all the Members of Parliament, who as a rule attach considerable weight to the views of Local Authorities in their constituencies." This report, then, tells us that the Bill referred to, as admitted by the Council, has very little chance of passing; and it is interesting to note that the expense of promoting it would be practically nothing. If we go on, and we are beaten by the Society of Architects, it will cost us nothing, and we shall see where we are. Bills can be introduced again and again. I think the policy of the Council has been a policy of pure funk : they have looked at a dwarf and fancied it was a giant. Look at the opposition in other directions. Every Local Authority would oppose the Bill. Politicians would rend it in twain. You would grant facilities to large trading companies which you would deny to the man who has the ratepayers' interests at heart. You put in a clause to make Local Authorities employ architects at the cost of the ratepayers, but you allow large capitalist companies, earning big dividends, to proceed without. Apparently, in the case of railway stations, the Local Authority has to employ an architect to act with the engineer of the railway company. If at Manchester a great station is to be built, the railway company employs an engineer, but under the Bill the Local Authority must employ an architect. The Local Authority will say, "Why should this come out of the rates? You give a privilege to a trading company which you should not do : you are having their work at the expense of the ratepayer." That is not the only opposition I can see. Our Council have not approached the Surveyors' Institution, nor the Institution of Civil Engineers. These are both very important bodies. They have thousands of members all over the kingdom, working for the Government and for Local Authorities, closer in touch with Parliament than we are, and having the ear of Members. Those are the men who will say we should have gone to them. The Council ought to have gone to them and ascertained whether the Institute could count upon their support. Then we could have approached the Society of Architects. But if we go to Parliament and find we have the Local Authorities, the Institution of Civil Engineers, the Surveyors' Institution, and other large bodies against us, what would it matter if we had added to that opposition a small Society of only a few hundred members? Our Council have been wasting their time. Instead of making honourable proposals to a responsible body like the Surveyors' Institution, it has been wasting its time flirting with an insignificant little "flapper." Our Council come to us to ask us to bless the union. But we are going to put our paternal foot down and say "No!" I have shown good reason why we should not go on with this scheme in the face of the opposition we are bound to get from far more important bodies than the Society of Architects; but I have a much more important reason, and that is our Royal Charter. Royal Charters are very valuable. Some things may increase in value by being brought up to date—but a Royal Charter is not one of them. I know certain bodies that would not think of going to the Privy Council to sanction an alteration in their Charter, except for the very gravest reasons. But here I see that the Institute obtained a fresh Charter in 1887, another in 1909, and now it is proposed to ask for another in 1912. I saw a gentleman who could give me the very best advice on this subject, and in mentioning the matter to this Meeting I am bound to deal with his advice with some delicacy. I said to him, "Do not answer me if you think what I am asking is a question I should not put to you. But is it advisable for us to go to the Privy Council and ask for an amendment to our Charter?" I explained to him, very shortly, what the proposal was. He spoke very highly of the Institute, and said, "What you say is right; the proposal to take in a Society of a certainly inferior position to your own would mean that you would be extending the privileges of the Royal Charter to a body without one, and that is a very serious thing for you to contemplate. It might lead to an inquiry, and it is not a good thing to have an inquiry about a Charter." And he left it there. I do not think this Institute should do anything to jeopardise our Charter. And when we consider if this proposal were passed, it is so disliked that there would be a protest to the Privy Council, signed by many members of the Institute, is it worth while taking this risk in the face of so strong an opposition? When you make a bargain, you ask what you are going to get for it. We are going to get very little. It is very nice for the Society of Architects; they play the game "Heads I win; tails you lose." We don't want to join in. It has been said that we want to go carefully; we want to admit this antagonistic Society and make friends of our enemies. If we do that, we shall make enemies of our friends, because this proposal is intensely disliked by many of the younger members, who think their position is going to be damaged. It is admitted that the status of the Institute will be damaged for a time, but it is said that it will get right in the end. It is an obvious fact that we may never get registration. I was one of the first to advocate registration. I spoke in favour of registration twenty years ago, and I was laughed at. But if you lower the status of the Institute you lower its influence, and you should think very seriously of this. I do not think it would help us in the slightest if we admitted the Society. I support the amendment to refer this proposal back for further consideration. Proper overtures should be made to big people who are likely to oppose us, and then we might think of these little people afterwards.

Mr. W. R. Davidge [*A.*]: After the exceedingly damaging indictment by the last speaker, I do not think I need touch on the legal points. The Council them-

selves admit that the proposals must damage a large number of members of the Institute, and I venture to say that if every member here looks into the proposals, he will find that there is no class of member which will not be damaged in some way or another. When I received this notice paper I was inclined to think that the Council were right in their proposals. But if you look into the scheme you will find that not only is injustice done to every class, but an outside body is to be allowed to nominate 100 Fellows to the highest class of this Institute without a murmur from anyone, either on the Council or in the general body. This same outside body is also to be allowed to propose an unlimited number to come into the Licentiate class, and then, without a word from the general body, by the approval alone of the Council, they are to be transferred direct to the Fellowship. It is a gross injustice to all our existing Licentiates.

The PRESIDENT: Will you add that there has to be an examination?

Mr. DAVIDGE: After examination. But the same injustice remains. ("No.") Those who say "No" have not read it. The next point, the injustice to the Associates, has been very ably dealt with by Mr. Needham Wilson himself. It speaks for itself. But the opposition comes not from the Associates, but from the united backbone of the Institute. And the injustice does not stop there. The Students of this Institute who have spent years studying for the Preliminary and Intermediate Examinations will have added to their number other students, with no greater abilities, all of whom are to be exempted from the Preliminary, and many of them from the Intermediate. What for? Is that fair? The first and most important point of all is whether all this sacrifice is necessary? Is there any professional institution that possesses registration which has felt it necessary to absorb every other professional body? Not one. The medical profession has been touched upon by a previous speaker. He knows there are many bodies in the medical profession which are united for registration purposes, but for no other purpose. We are anxious to unite with everybody who will help us in the work we have in hand. But we do not see the necessity for this amalgamation. I need not touch upon the way in which the Council themselves are divided on the point. I need not emphasise the point that this document itself bears evidence of very great diversity of opinion, and should be referred back to the Council for further consideration.*

Mr. G. L. ELKINGTON [*A.*]: The amendment is that this Agreement should be referred back. I appeal to all here to examine certain clauses in the Agreement as business men. On Page 3, sub-section (*c*), the document says: "The Royal Institute shall provide appointments for the two senior members of the Society's salaried staff." I desire to point out that under Section 16 of the Charter of 1887 such a matter rests entirely with the Council, and the general body has no power to relieve the Council of its responsibilities under that Charter. The Charter is to be overridden in other respects, admittedly. You are redressing that by applying for a Supplemental Charter, but the Council is not seeking, in that Supplemental Charter, the requisite power for the general body to assume any responsibility now vested solely in the Council. This Meeting cannot pass the proposed Agreement in this form. If it did, any member not here present, or not a party to it, would have a right of redress against the Council and against the Institute for having proceeded contrary to the Royal Charter now in force. Another point I desire to make also shows the feeble way in which this Agreement has been drafted. It is provided that the assets of the Society shall be applied to the payment of its debts, and the Institute is to make good any deficiency. On a former occasion we were informed that those assets exceeded the liabilities, and that there would be very little risk of the Institute's funds being touched. But it must be remembered that this Society is nothing more than a limited liability company, with articles of association, and what is there to prevent it from incurring further liabilities, or otherwise disposing of these assets in the interval between the signature of this Agreement and the winding up of the Society? The Institute is to be pledged by this Agreement to make good an unknown deficiency. It is absurd that a body of men, practising architects, men of intelligence and some knowledge of business matters, should be asked to consent to such an agreement. I am dealing with the form of the Agreement only because other speakers have dealt with its principles, and I think that if this Meeting will only regard it in a business light they will see there is every necessity to support this amendment and refer the whole matter back to the Council for reconsideration. On a former occasion, as stated in the Council's Statement of Policy, a Draft Bill for the Registration of Architects was submitted, and more or less carried. During that discussion—and it is on the minutes of that Meeting—you, Mr. President, undertook to make a note of certain suggestions which had been made relative to the wording of the clauses of that Draft Bill. You undertook further that the Council should give them consideration. Several months have elapsed since that undertaking, but the clauses come before us now in the same form as before, and we are left quite in the dark as to whether the Council have given consideration to them or not. I support heartily the amendment proposed by Mr. Peach.

Professor BERESFORD PITE [*F.*]: I wish to support Mr. Peach's amendment, because I think it is inadvisable to include a Draft Bill in the Agreement, for the reason that the Draft Bill does not conform with the unanimous decision of the Institute. Mr. Gibson, in his masterly speech, on which I should like most heartily to congratulate him, as I congratulate myself on being present to hear it, skated with all the skill of a Northerner over the exceedingly thin ice of sub-section I Section IV. of the Report presented in March 1907. Of course you will not find sub-section I here. It is carefully excluded. If you go back to the Report of the Registration Committee appointed by the Institute—a report which was in the nature of a compromise in order to get the influences which existed in the Institute marshalled as far as possible on behalf of registration, a report which carried many with it who otherwise would not be converted to the principle at all—that Report was adopted by the Institute with the express exclusion of the requirement that public bodies should employ a member of the Royal Institute. Therefore I suggest that when this comes up again the Report of the

* Mr. Davidge, in some concluding remarks, referred to a discrepancy in the Institute Papers as to the date of King Edward's Supplemental Charter, which in the Notice Paper for the Meeting of 8th January (page 5) is given as "11th January 1909," while in the KALENDAR (page 40) it appears as "21st December 1908." It has to be explained that intimation was received from the Privy Council that the King had approved the grant on the "21st December 1908" [see JOURNAL, 19 Jan. 1909, p. 176]. This was assumed to be the date of the grant, and the Charter till now has always been cited as of that date. The Letters Patent under the Great Seal however bear the date "11th January 1909," and the solicitors advising that this is the official date it was so cited in the Notice Paper. For the future therefore the year of King Edward's Supplemental Charter will be given as 1909 instead of 1908.—ED.

Registration Committee ought to be set out. We are told by Mr. Gibson clearly that when the matter was laid before the solicitor he said it was nebulous. So sub-section I is put in again. And this is a definite movement—I make no invidious suggestion—it is a movement to get the Institute to-night to swallow a report which it unanimously refused before. Further consideration of this point is eminently desirable; and on that account, and on that account only, I beg to support Mr. Peach's amendment. The effect is, I think, that the Agreement be referred back for the purpose of excluding from it the First Schedule.

Mr. R. J. ANGEL [*A.*] moved that the amendment be forthwith put, and

Mr. W. H. BURT [*A.*] seconded.

Sir ASTON WEBB, C.B., C.V.O., R.A. [*F.*]: I speak very reluctantly to-night, and I have come here reluctantly, because I have never been a supporter of such a scheme of registration as is now put before us. I think it is better that we in this Institute, when discussing this matter, as I am glad we are doing this evening, in a reasonable and friendly spirit, should say quite plainly what we really think. I am aware that a large number of members are in favour of compulsory registration of the severest kind. I know that this feeling exists, and I determined not to oppose the general feeling of the profession; though I cannot assist it. It is for that reason that I have stayed away; but I have been told that that is not the right thing to do; that one ought to come and state one's position. So I am here to state that it seems to me that this Agreement is of a very complicated character, because, in spite of what has been said, we have two points to consider. One is the desirability of taking the Society of Architects into our ranks. And the other is to approve the outlines of a Bill for compulsory registration of a very stringent kind. It seems to me that it is open to us all to debate the question of the junction of the Society of Architects with the Royal Institute, and I suppose that we should all take it as a general principle that it is better to have one united body representing the architectural profession of Great Britain, than two, and that it is entirely a matter of terms whether we approve of the amalgamation or not. But I am bound to say that, having given this my best consideration, I do not think that it is a reasonable proposition to include the details of this Bill in the proposed Agreement. I greatly hope that the Council—and I am very sorry there are so many of them absent to-night—will see their way to reconsider this matter, which has been laid so fairly and strongly before us by several speakers. Mr. Peach, I thought, moved his proposal in a most proper and reasonable way. I feel bound to support that proposal, and I shall vote for asking the Council to reconsider this question of including the Bill. I am quite sure that it will lead to endless complications if we commit ourselves to the details of the Bill. Are we going to trust the Society of Architects? and are they going to trust us? If so, why is it necessary? I do not think it is a dignified position for us to commit ourselves to the details of a Bill in order to bring them in. Surely the advantage to them is very far greater than that. To become members of this Institute would be an immense advantage to them, though I admit that it would be some advantage to the profession too. But that we should be bound down to details of a Bill in order to bring them in seems to me an impossible proposal, and I hope you will have regard to the very strong feeling expressed by members this evening. I believe there is a strong feeling that whether we approve of registration or not, whether we approve of the amalgamation of the Society of Architects or not, we shall not approve of tacking on details of a Registration Bill to this Agreement, because we feel sure that if the Society of Architects come in they should come in on an equality with us. If not, the Bill will be a constant source of friction between us. I do not think any Parliament would pass a Bill including these provisions with regard to Local Authorities. Every Council will get hold of their Member and tell him that if this Bill comes up he must vote against it. And he would certainly do so. You would have them against you over that point, and against you on most other points. It is reasonable that we should ascertain—and I think it is only a friendly thing that we should ascertain—the feeling of the Engineers and the Surveyors with regard to it. I am told they are not friendly to a proposal of this sort. If they are not, I think we should break the ground first by finding out from them why they oppose it, and see whether it would be possible to bring in some Bill which they would not oppose. Otherwise it is hopeless to attempt to promote a Bill and think we could carry it; yet if we failed we shall have brought these men in, and it will be said that we have not done what we promised. It will be said that we ought to have done it, and that we have not gone the right way about it. I have many other things to say, but at this late hour it is better to centre my remarks on that one point, and I sincerely hope that you will meet the general feeling by agreeing to reconsider this proposal and take it back for this purpose.

The PRESIDENT: It is now ten o'clock, and as we cannot go on much longer it will probably be the simplest thing if we adjourn now, and in the meantime before we meet again the Council will consider this proposal.

Mr. K. GAMMELL [*A.*]: I rise on a point of order. I heard a resolution properly proposed and properly seconded. But it was quite rightly, by your courtesy, Sir, that Sir Aston Webb was heard. We are very lucky to have had such a splendid criticism of this question from him. A gentleman, however, at the back of me asked whether it was strictly in order, and I submit that it was not.

The PRESIDENT: The meeting evidently wishes to vote upon the question, and I have no desire to prevent it. Therefore, I put this matter to the vote. Mr. Peach, will you kindly repeat your amendment?

Mr. PEACH: The amendment is that the Agreement be referred back to the Council for further consideration.

The PRESIDENT: On two points, I think you said, particularly.

Mr. PEACH: It has been put on three points—on the matter of including the Bill and the Charter and the Arbitration clause.

Mr. GAMMELL: It is the whole thing.

Mr. ELKINGTON: I supported the amendment on the distinct understanding that it meant what it said—that the proposed Agreement be referred back.

Mr. SHEPHEARD: As a matter of personal explanation, I believe I am in order, Sir, in telling the meeting what I understood was the amendment I seconded. I understood Mr. Stanley Peach to move the reference back to the Council of the Agreement embodied in their Resolution which embraces the whole of the subject matter on the notice paper. That is what I understood in seconding the amendment.

Mr. PEACH: With the permission of my seconder, we ask you to take it back on the whole thing.

The PRESIDENT: I put it to the vote. The amendment is that the whole matter be referred back to the Council for further consideration.

On a show of hands, the amendment was carried by a large majority.

The Meeting then terminated.

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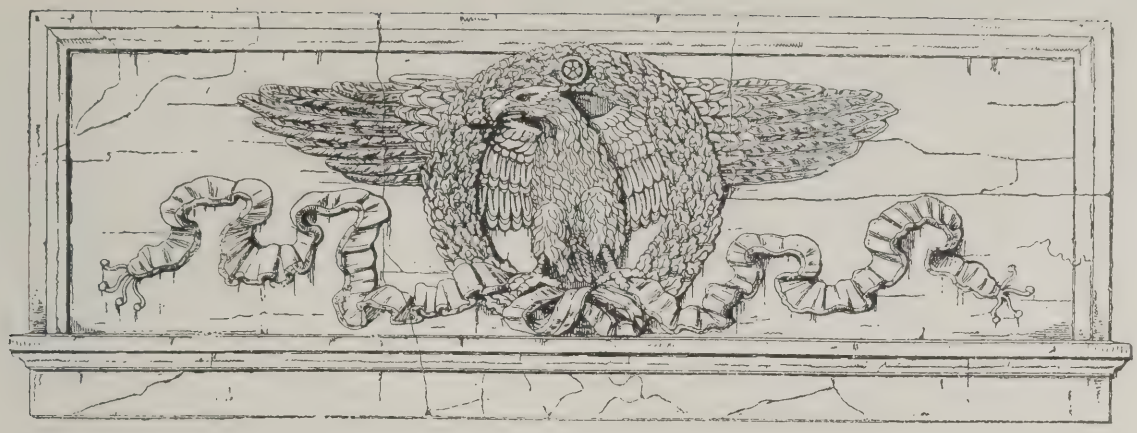

THE LAW AS TO SUPPORT FOR BUILDINGS.

By J. H. Cockburn, Solicitor, Rotherham,
Author of *The Law of Coal and other Minerals.*

Read before the Sheffield Society of Architects and Surveyors at Sheffield University, 8th February 1912.

THE late Lord Bowen, one of the ablest Judges of the past century, said that the right of support is intricate and obscure. Therefore, anyone presuming to treat it must be wary. I propose to say very little in regard to support as affected by mining operations, and to deal mainly with the right of lateral support for buildings.

Exceptional Cases.

Before considering the general rule as to how the right of support for buildings can be acquired, it is desirable to look at three cases where the general rule is not applicable.

(1) *Where Land would be let down although not built on.*

Supposing damage has been caused to a building by digging away soil from adjoining land, the first question is, would the property which has been damaged by the removal of lateral support have sunk or shifted if no building whatever had existed upon it?

This question is most important, because as a matter of law it is not universally essential that a building should have stood for twenty years in order to entitle the owner of it to claim damages for the withdrawal of support. Thus, if it be clearly proved that, irrespective of the weight of the building which has sustained damage, the land on which it stands would in its natural condition have sunk or shifted by reason of the adjacent excavation, then the owner of the damaged property can recover damages for disturbance of his natural right to the support of his land as land; and the injury to the building will merely swell the amount of compensation payable in respect of the hereditament as a whole. There was a decision to this effect in 1859.* Certain pillars of coal had been left unworked under land near to some houses belonging to one Browne. Robins the owner of the coal worked out the pillars, and so damaged Browne's houses. As it was proved that Robins' workings would have interfered with the stability of Browne's land even though no building had been erected on it, the Court held that Browne's natural right of support had been infringed; and that Robins was liable to pay damages, not only in respect of the injury caused to the land, but also in respect of the houses built on it.

* *Browne* v. *Robins* (1859), 28 Law Journal, Exchequer, 250.

When a claim can be maintained on the ground that the right of support for land in its natural state has been disturbed, the liability for inclusive damages attaches, notwithstanding that the buildings have not been erected for twenty years, and notwithstanding that the excavation in the supporting land has been done as carefully as possible.

Cases where this ruling holds good are more likely to occur in places where the subsoil consists of sand or other loose foundations, than where it is hard rock; but wherever buildings are damaged by the withdrawal of support, the first question is, would the land itself have given way if no buildings had been placed upon it?

(2) *Removal of Support by a Person not entitled to the Adjoining Soil.*

The general rule does not apply where support is withdrawn by a trespasser or other person not entitled to exercise any acts of ownership over the land affording the support. Thus, irrespective of whether a building has stood for twenty years, the owner of it can recover damages from a person who is not owner of the adjoining ground, nor acting under him, and who *negligently* pulls down a building which yields support, or excavates in the adjoining ground so as to let down the building entitled to support.* A case of this kind does not often occur; but it is necessary to mention it by way of reminder.

(3) *Right of Support dependent on Document.*

The general rule does not apply where the right of support is granted or excluded by, or is dependent on, a document executed by the person who formerly owned both the building receiving and the building yielding support. Time will not allow of this branch of the subject being discussed on the present occasion: the question will turn on the language of the particular document, or on the circumstances of the particular case. Suffice it to say that the circumstances may be such as to preclude the recovery of damages occasioned by the removal of lateral support. Thus, supposing there is a sale by auction at which Mr. Murchie buys one lot whereon an ancient wall is standing; and Mr. Black buys the adjoining plot subject to conditions under which Black is bound to pull down existing buildings and build a new house. Black's operations for complying with these conditions result in the old wall on Murchie's plot being knocked down. In a case where these facts existed† the Court decided that Murchie could not recover damages, for the reason that Black had been *required* to excavate and build by the common vendor, who could himself at the time of sale have done what he liked with his joint property.

The General Rule as to Acquisition of Support for Buildings.

Having by this method of exclusion got rid of cases where the general rule does not apply, we are now ready to state that rule; and this cannot be done better than by quoting some words used in the celebrated leading case of *Angus* v. *Dalton* decided in 1881 by the House of Lords, aided by a number of Judges specially called in for their assistance. Although the legal problem was abstruse the facts were simple. Messrs. Angus had a building in or near Newcastle-on-Tyne, which formerly consisted of two houses and had stood for more than twenty years. About twenty-seven years before the cause of action arose, they converted one of the houses into a coach-factory, and for this purpose removed the internal walls, and put in girders for supporting the upper floors of the factory. On one side these girders were let into Messrs. Angus's walls; and on the other side they were let into a large chimney stack

* *Jeffries* v. *Williams* (1850), 20 Law Journal, Exchequer, 14. *Bibby* v. *Carter* (1859), 28 Law Journal, Exchequer, 182.

† *Murchie* v. *Black* (1865), 34 Law Journal, Common Pleas, 337.

adjoining upon property belonging to the Commissioners of Works. This materially increased the lateral pressure upon the adjoining soil belonging to the Commissioners of Works. Twenty-seven years after the alteration was made, Messrs. Dalton were employed by the Commissioners of Works to pull down and rebuild their adjoining house. Messrs. Dalton employed a sub-contractor, who by removing the foundations of the Commissioners' building let down the house of Messrs. Angus.

The House of Lords decided that the Commissioners of Works were liable to pay damages for the injury occasioned by the wrongful withdrawal of support, notwithstanding that they had employed a competent contractor and directed him to use proper precautions. The work was in its nature dangerous to adjoining property, and therefore the principals could not discharge themselves from the liability resulting from proper means not having been adopted for preventing injurious consequences.

The decision of the highest tribunal in the land is clearly stated by Lord Watson in golden words:* "A right to lateral support from the adjoining soil may be acquired for a building which has enjoyed that support, peaceably and without interruption, for the prescriptive period of twenty years. The obligation which the creation of such a right by user imposes upon the owner of the adjacent soil is to give continued support to the building. Consistently with that obligation he can make any lawful use of his land which he thinks proper. He may dig into, or even remove, the strata from which the building derives support, provided he gives efficient substituted support by means of a retaining wall or other device. The proprietor of the building cannot complain that his right has been infringed, unless and until the stability of his building has been affected by the withdrawal of its lateral support."

In the course of this leading case it was shown that much of our modern law of support is founded upon Roman law. Now, one rule established by the Roman lawyers was that the acquisition of an easement must be "nec vi, nec *clam*, nec precario" *i.e.* not by force, nor secretly, nor by permission.

In *Dalton* v. *Angus* it was laid down that the right of support is an easement, and cannot be acquired if these conditions are not complied with. Thus if Angus had built an ordinary chimney stack for carrying its own weight and represented to his neighbour that it was nothing more, when in reality it was intended to carry a greater weight, that would be *clam*, a clandestine proceeding on which a valid easement of support could not be gained.

"*Clam*" does not mean "fraudulently" or "surreptitiously." It is sufficient that the easement has not come to the knowledge of the owner against whom support is claimed, and is not of such a nature that his attention ought reasonably to have been drawn to it.†

If anyone is about to build a heavier building on his own land he should be quite open about it. It is not desirable to give his neighbour any opportunity of contending that false or misleading statements have been made to him. However, "more is not requisite than to let the enjoyment be so open that it is known that some support is being enjoyed by the building. That is enough to put the owner of the land on exercising his full rights, unless he is content to suffer a curtailment, not, in general, of any consequence."‡

When the right of support for a building from land is in question the age of that building must be reckoned from the date of its last increase of burden; by an addition to the bulk and weight of the building,§ or, by the support having been diminished by excavation in the land on which the building stands.‖

* *Dalton* v. *Angus* (1881), Law Reports, 6 Appeal Cases, 740; 50 Law Journal, Queen's Bench, 751.

† *Union Lighterage Co.* v. *London Graving Dock* (1901), Law Reports, 2 Chancery, 300.

‡ Lord Blackburn in *Dalton* v. *Angus*, above.

§ *Dalton* v. *Angus*, above.

‖ *Partridge* v. *Scott* (1828), 7 Law Journal, Exchequer, 101.

Support of Ancient Buildings from Buildings.

The great case of *Angus* v. *Dalton* was one where support was claimed from adjoining land. Shortly afterwards it was decided that where two ancient and contiguous buildings have enjoyed support from each other for more than twenty years, the one is entitled to an easement of support from the other, even though the servient tenement may be the property of a rector or other ecclesiastical corporation.*

Support of Modern Buildings from Buildings.

Unless both buildings formerly belonged to a common owner who sold or devised them separately on the implied condition that the one building should support the other, it would appear that the owner of a building which has enjoyed support from an adjoining building for less than twenty years cannot claim compensation from the owner of the adjoining building. In such circumstances the owners need not keep the supporting building in repair. The person who wants support must provide it for himself.†

Extent of Supporting Area.

As regards distance or extent, support must be given by that portion of land, wider or narrower, the existence of which in its natural state is necessary for yielding support. If the neighbouring land is of so solid a character that, being of rock, a foot of it is enough to afford support, that will be the limit; but if the neighbouring land consist of loose sand or mud, or be so friable or unsolid that a quarter of a mile is required for yielding support, that will be the extent.‡

If, however, an intervening owner in the lawful exercise of his rights has made an excavation, and the subsoil so removed would have sufficed for supporting land or buildings, the owner of the buildings receiving support cannot maintain an action for damages against the distant owner for digging in his property in a case where, if the intervening excavation had not been made, he could have done so without causing damage to the property next beyond it.

Supposing support for a distance of 200 feet from my building is required, and my next adjoining neighbour only owns the first 100 feet, my right is not limited to that 100 feet; it extends to the remaining 100 feet owned by my next adjoining neighbour.

Put in another way, if a property owner makes an excavation, thereby rendering his surface or building less stable and more likely to fall when the adjoining or neighbouring land is excavated, he cannot thereby impose a greater responsibility on the owner of the adjoining or neighbouring land, or increase his own natural right to lateral support; neither can his natural right of support be made to affect land not immediately adjoining, if an intervening owner removes the rock or soil which serves as the first or nearest buttress of support.

Thus, the Swan Village Gas Works of the Birmingham Corporation stood on land lying a short distance away from land under which one Allen was working coal. Many years before, the coal under some land lying between the site of the Gas Works and Allen's Royalty was worked out by a third person. The seam dipped towards Allen's coal-field, and on his working nearly up to his boundary, a creep or pull-over occurred and cracked the gas works. It was admitted that if the intervening coal had not been worked out by the third person, Allen could have worked up to his distant boundary, without causing any damage to the gas works. Whereupon Sir George Jessel and the Court of Appeal in 1877 decided that the Birmingham Corporation could not maintain an action against Allen. A similar ruling would be given if an excavation from or near to the surface should be made in similar circumstances.

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* *Lemaitre* v. *Davis* (1881), Law Reports, 19 Chancery Division, 281.

† *Colebeck* v. *Girdlers' Co.* (1876), Law Reports, 1 Queen's Bench Division, 234.

‡ *Birmingham Corporation* v. *Allen* (1877), Law Reports, 6 Chancery Division, 284.

How the Gaining of the Right of Support can be hindered.

Assuming that land on which a house is newly built could not be let down as land by excavations in the neighbouring soil, then "at any time within twenty years after the house is built the owner of the adjacent soil may, with perfect legality, dig that soil away, and allow his neighbour's house, if supported by it, to fall in ruins to the ground."*

An injunction will not be granted to restrain anyone from erecting on his own land a building which may gain the right of support after uninterrupted enjoyment for twenty years. The only way of preventing it is to excavate or operate in the adjoining property before the twenty years expire. If it does not suit the purpose or the interest of the owner of the adjoining property to do this, the law will presume from his remaining passive that he acquiesces in support being gained against him.

Obligation and Right to repair a Supporting Building.

Although a person cannot do anything actively which results in support being withdrawn from his neighbour's building entitled to support, yet the person whose property affords support can sit still and do nothing, even though his passivity may result in his own land or house giving way, and his neighbour's buildings may, in consequence thereof, fall down. For this reason, it is competent for the person receiving support to enter upon his neighbour's land for repairing the tenement or party wall which affords support. The person wishing to preserve his right of support must himself take active measures for that purpose. This was so determined in *Colebeck* v. *Girdlers' Co.* in 1876.

Colebeck was lessee of No. 40 Basinghall Street, which was supported by a wall which stood between the next house, No. 38, built soon after the Great Fire of London, and an archway leading to the Girdlers' Company's Hall. Colebeck had covenanted with his landlords the Girdlers' Company that he would keep No. 40 in good repair. He contended that this covenant implied an obligation on the part of the Girdlers' Company to keep the supporting wall in such condition as to enable him to perform his covenant to repair. But a strong Court held that there was no such implied agreement on the part of the landlords, and that the tenant was limited to the right of repairing or rebuilding the supporting wall in order to preserve his easement.

As to whether or not underpinning upon the adjoining soil of a neighbour constitutes trespass in law, I have not been able to find any recorded decision directly bearing on the point. By analogy with Colebeck's case just referred to, it would appear that it does not constitute trespass for which damages would be awarded. Rather than have to pay substantial damages for removal of support, it would be better to run the risk of an action for damages for trespass in underpinning. A small sum could be paid into Court to cover nominal damages on that account. If the adjoining owner should be so foolish as to sue for trespass on account of the underpinning, the probability is that any tribunal would hold that he thereby waived any claim for withdrawal of support, and acquiesced in his land or building being let down. The defence to his claim would be *volenti non fit injuria*.

Damages for Disturbing Support.

He who by the removal of his own building causes injury to the contiguous building of another must compensate that other, if he had the right of support, however carefully the operations of the person pulling down have been conducted; while if the other had not any such right, the person pulling down will only be answerable for negligence.

Negligence will be inferred or proved if the person charged with it could have conducted

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* Lord Penzance in *Dalton* v. *Angus*, above.

his operations according to some other reasonable and usual method, which would have materially diminished the risk to his neighbour without materially increasing the burden or expense to himself.

The obligation of the owner of the supporting building has been put into doggerel thus :—

> " He must not kill, but need not strive
> Officiously to keep alive."

Even though a right of support may not exist, any owner digging in his own land or removing his own building must use due care and skill so as not to damage his neighbour's building.*

When does a cause of action arise for withdrawal of support? It first accrues when the owner of the damaged building sustains actual damage.†

Excavating in the adjoining land does not constitute a cause of action; because it may be that no damage will actually result; or the excavator may put up a retaining wall strong enough to serve as a complete substitute for the soil which previously afforded support. Accordingly, the owner of the injured building can sue for damages at any time within six years from the happening of the mischief to his building. The time is not reckoned from the date of the withdrawal of the support but from the occurring of the damage. This rule flows from the right of every man to do what he likes in his own land subject always to this, that if his mode of using it does damage to rights possessed by his neighbour, he must make compensation.

As damage to the building entitled to support is the essential factor in a claim for compensation, it follows that fresh claims may be preferred on every successive occurrence of fresh damage resulting from the removal of support.‡ Neither the risk of future damage, nor depreciation of the selling value of the surface in consequence of such risk, can be taken into account in assessing damages in any action that may be brought.§ This being established law, it will be prudent for anyone paying compensation for damage caused by the removal of support to take a discharge expressly covering future as well as past and existing damage.

If a cellar or other excavation was made by a preceding owner of a piece of property, and the building of a neighbour sustains damage, the succeeding or present owner is not responsible to his neighbour. It was not the present owner who made the excavation and no legal obligation is cast on him to build a retaining wall. This was so determined in 1900 in a case‖ where Lord Donington, as proprietor, had worked out coal resulting in the cracking of an adjoining manor house. After his death, Mr. Hall, the owner of the house, sued the Duke of Norfolk, as trustee under the will of Lord Donington, on the ground that His Grace, as present owner, had failed to provide support. But it was held that the Duke and lessees to whom he had granted a lease were not liable, inasmuch as they had not made the excavation; and further that damages could not be recovered against the estate of Lord Donington because, the action being a personal one, it ceased with his death.

Although the claim in *Hall* v. *Duke of Norfolk* was based on subsidence resulting from mining operations, the principle of the decision in that case would undoubtedly be applied where the excavation was in the surface of adjacent lands.

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* *Dodd* v. *Holme*, 1 Adolphus & Ellis, 493.

† *Bonomi* v. *Backhouse* (1861), 28 Law Journal, Queen's Bench, 378; 34 *ib.* 181.

‡ *Mitchell* v. *Darley Main Colliery* (1886), Law Reports, 11 Appeal Cases, 127.

§ *Tunnicliffe* v. *West Leigh Colliery Co.*, Law Reports 1908, Appeal Cases, 27.

‖ *Hall* v. *Duke of Norfolk* (1900), Law Reports, 2 Chancery, 493.

LIABILITY FOR DISTURBANCE OF SUPPORT WHERE CONTRACTOR EMPLOYED.

(i.) *Both Employer and Contractor liable.*

The circumstances may be such that both employer and contractor are liable to the person whose right of support is infringed. Thus, if Mr. Peate employs a contractor to pull down and rebuild his shop, this necessitating the digging of deeper foundations, and the contractor fails in the necessary duty of shoring up or underpinning the adjoining shop belonging to Mr. Bower, with the consequence that Bower's building is damaged, Peate the owner, and also the contractor employed by him, will both be liable to Bower, notwithstanding that the contractor has agreed to indemnify Peate against all claims. When so deciding in 1876,* the Court pointed out that the contractor had not been employed by Peate to give support; Bower had it independently. The Court said "that a man who orders a work to be executed, from which in the natural course of things injurious consequences to his neighbour must be expected to arise, unless means are adopted by which such consequences may be prevented, is bound to see to the doing of that which is necessary to prevent the mischief, and cannot release himself of his responsibility by employing someone else; whether it be the contractor employed to do the work from which the danger arises, or some independent person employed to do what is necessary to prevent the act he has ordered to be done from becoming wrongful." In such circumstances therefore it is important to the owner to employ a contractor who will be financially able to stand to the indemnity which he has engaged to give.

The rule is thus stated by Lord Watson in the leading case of *Dalton* v. *Angus*:† "Where an employer contracts for the performance of work which, properly conducted, can occasion no risk to his neighbour's house, which he is under obligation to support, he is not liable for danger arising from the negligence of the contractor.

"But, in cases where the work is necessarily attended with risk, he cannot free himself from liability by binding the contractor to take effectual precautions. He is bound, as in a question with the party injured, to see that the contract is performed, and is therefore liable, as well as the contractor, to repair any damage which may be done."

The building owner will be liable for damages occasioned by the removal of support, even though the specification provides that the support is not to be disturbed. It is his duty to see that reasonable skill and care are exercised in operations which expose the adjoining property to risk.

He cannot escape from liability unless he proves that it could not have been anticipated that any workman of ordinary skill would have dreamt of interfering with the support.‡

He will probably be exempt if he can prove that the contractor or his workman is positively dishonest or insane. But short of this, the employer must stand the consequences of putting his trust in fools.

The reason why provisions in a specification are not sufficient is that the person who employs a contractor really does his own work with the assistance of a contractor, and is responsible for seeing that the work is properly done.§

(ii.) *Only Contractor liable.*

It may be that only the contractor will be liable. Thus, where a person entrusts the rebuilding of his house to a contractor who, as a matter of contract or usage, can and should, by shoring or other usual means, prevent damage from happening to adjoining property, the owner of the house that is being rebuilt will not be responsible for the negligence of the con-

* *Bower* v. *Peate* (1876), 45 Law Journal, Queen's Bench, 446.

† *Dalton* v. *Angus* (1881), 50 Law Journal, Queen's Bench, 752.

‡ *Hughes* v. *Percival* (1883), 52 Law Journal, Queen's Bench, 719.

§ *Lemaitre* v. *Davis* (1881), 51 Law Journal, Chancery Division, 173.

tractor. The law presumes that the contractor knows his business, and will adopt the usual means of avoiding damage that in the nature of things can and ought to be avoided. The distinction consists in the fact that in such circumstances the mischief does not arise from the thing itself but from the negligent way in which it is done.*

(iii.) *Neither Owner nor Contractor liable.*

It may be that neither employer nor contractor is liable. Thus, supposing support is withdrawn from a newly erected building as to which it is certain that no right of support from soil or buildings exists, then neither the owner of the adjoining property, nor a contractor under him, is bound to shore up the immature building. The owner of the adjoining property is merely doing what he likes with his own, and he is not infringing any right of his neighbour.†

Defects in Site or Subsoil.

In a well-known work on "The Law of Building Contracts," it is stated that "an architect owes a general duty as a professional man to know and act in accordance with the law so far as it affects his profession, and if he designs or constructs without reference to the rights of adjoining owners he may render himself liable for negligence." But no English case is cited for showing that it has been conclusively held that an architect is personally liable to persons other than his employer for not knowing the law as to support. It may be that no architect in England has ever been remiss, or has ever been caught napping—just as it is said that there is no recorded instance of a solicitor having lost in a case against himself of breach of promise of marriage—the reason scandalously assigned is that he always writes the magical words "without prejudice" in his love-letters! Be this as it may; if an architect should actively superintend and direct operations which result in damage being occasioned by the wrongful removal of support, the arm of the law will probably be found long enough to make him personally responsible.

Both for the sake of avoiding legal liability and for the credit of his profession, an architect will do well to consider whether any right of support will be infringed, and to call his employer's attention to this risk. If damage is probable, then the specification should provide for shoring, or underpinning, or putting in a retaining wall, or whatever else is necessary; and also that the contractor shall indemnify both employer and architect against all claims and demands connected with the carrying out of the work.

As excavations enter largely into our minds on this occasion, it may be mentioned that in the absence of any specific guarantee or definite representation as to the nature of the soil, the contractor who has engaged to do the work cannot throw up his contract on finding that the soil is different from what he expected it would be.‡ To be safe he must ascertain the facts beforehand, or add to his price a sum to cover contingencies.

It is a well-known rule of law that an action cannot be maintained by a person from under whose land percolating water has been drained away. But in 1899 a singular case occurred near Hull where the Sutton Gas Company, in digging a tank for their gas-holder, pumped away not only underground water but also large quantities of silt, with the consequence that houses on adjoining land were let down and damaged. The problem before the Court was, Is this dirty water? If so, there is no remedy. Is it watery dirt? Yes: therefore pay damages. The contractor and also the gas company were held to be jointly liable.§

* *Butler* v. *Hunter* (1862), 31 Law Journal, Exchequer, 214.

† *Gayford* v. *Nicholls* (1854), 9 Exchequer, 702.

‡ *Jackson* v. *Eastbourne* (1886), 2 Hudson, 367; *Bottoms* v. *York Corporation* (1892), 2 Hudson, 220.

§ *Jordeson* v. *Sutton &c. Gas Co.* (1899), Law Reports, 2 Chancery, 217.

Party Walls,

so far as support is concerned, substantially stand in the same situation as ordinary buildings. Where there is a party wall neither owner of it can do that which will cause damage to the other owner or participant by removing or weakening the wall, in whole or part.

Flats.

There is only time for one word as to flats: but Lord Chancellor Selborne in *Dalton* v. *Angus* said: "If a building is divided into floors or 'flats' separately owned, the owner of each upper floor or flat is entitled to vertical support from the lower part of the building, and to the benefit of such lateral support as may be of right enjoyed by the building itself."*

Summary.

To recapitulate, in dealing with questions affecting the right to support for buildings, the first question is, Would the land entitled to support have been let down if it had remained in its natural state even though no building had been placed upon it? If so, damages will be recoverable.

Has support been withdrawn by a stranger or trespasser not having any ownership or interest in the land which has afforded support? If so, damages will be recoverable.

Has support been withdrawn by a person who under express or implied obligation by document was debarred from removing it? If so, damages will be recoverable.

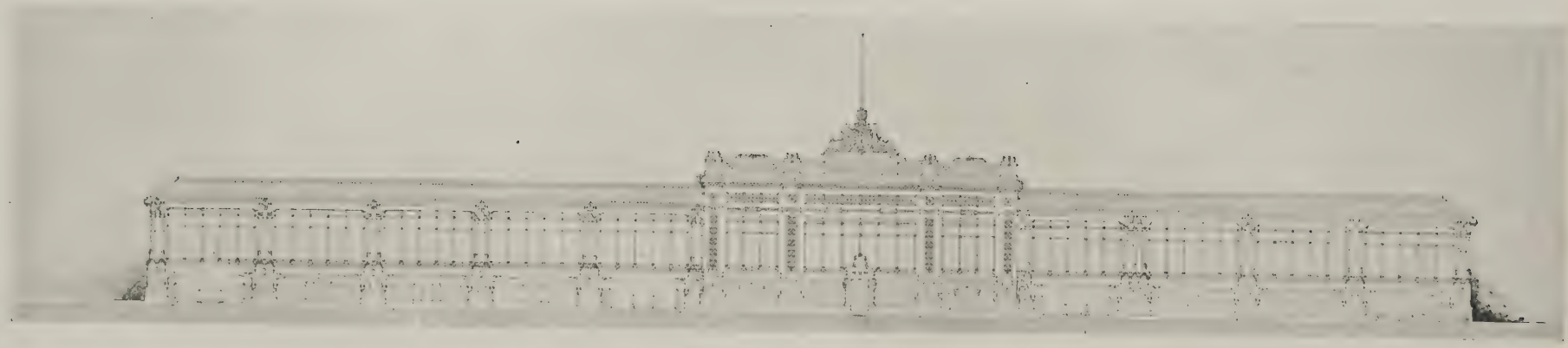
Has support been withdrawn from a building which has enjoyed it for twenty years, without force, concealment, or permission? If so, damages will be recoverable.

Has the damage happened within six years before beginning of action? If so, damages will be recoverable.

Is the person dead at whose instance the damage was caused? If so damages will *not* be recoverable from his representatives.

Did the contractor responsible for carrying out the work undertake to indemnify the employer against claims in connection with interference with rights of support? If so, he can be called upon to deal with demands made by the person whose rights have been disturbed.

* Per Selborne L.C., *Dalton* v. *Angus*, 50 Law Journal, Queen's Bench, 731.



COMPLETED STREET ELEVATION.

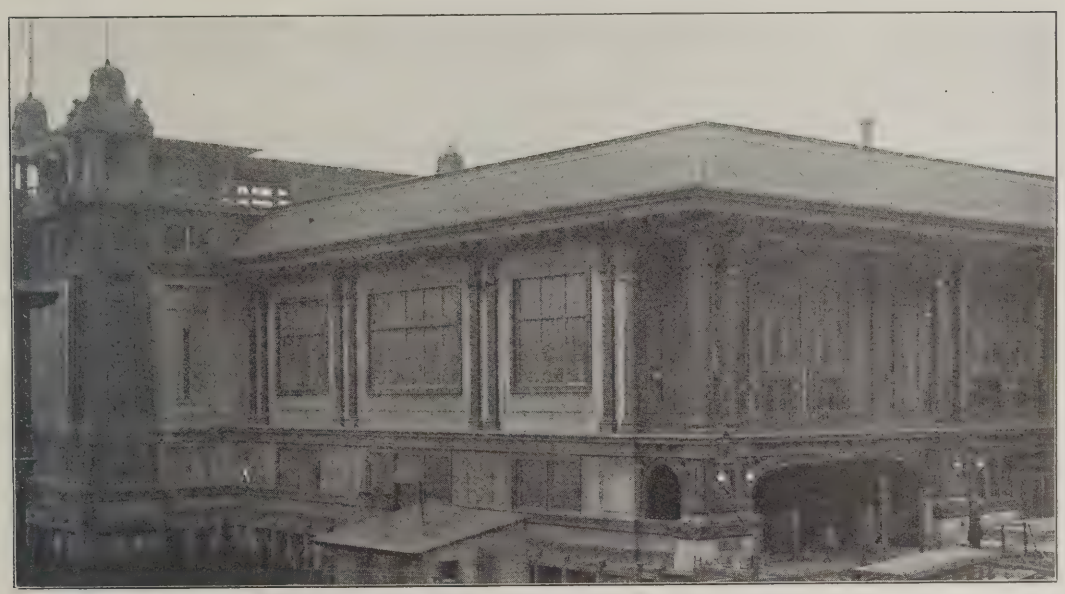
COMPLETED WATER-FRONT ELEVATION.

Walker & Morris, Architects, New York.

FIG. 1.—MUNICIPAL FERRY TERMINAL, NEW YORK CITY, N.Y., U.S.

ARCHITECTURAL DESIGN IN STEEL-WORK:

By Edward W. Hudson [*A.*]



W. Angle of Steel-framed Ferry Terminal, New York.

As most of the important steel-framed buildings in the United States have the columns and girders enclosed in masonry which appears to be structural, but is only a shell or curtain, any attempt at showing the steel-work and treating it architecturally is highly to be commended in the interests of truthful design.

Everyone who has landed in New York must, as the liner was making for her dock, have been struck by the sight of the fleet of steam ferry-boats darting to and fro across the Hudson River and the Inner Bay. The shore line of Manhattan Island bristles with piers and pile-fenders, forming slips for these boats and for vessels of every kind. They project any distance up to 800 feet, and even then are too short for the liners now under way. On the map, the piers give the shore the appearance of a comb with a vast number of teeth.

The building to be described is selected as being typical of what a well-designed fire-resisting structure ought to be; and the architects have succeeded in producing a result much superior to the general run of such structures even in the United States. It was completed in 1909 for the Department of Docks and Ferries, from the design of Messrs. Walker & Morris, of New York, which was selected in competition. The building is situated at the narrow south point of Manhattan Island, and is intended for ferry-boats running to Staten Island, N.Y. There is a similar block separated at present by a vacant space which is ultimately to receive a central pavilion, to complete a scheme of a total frontage of 720 feet, as shown in fig. 1 opposite.

As usual in the United States, the authorities have spared no expense in their effort to secure a building worthy of the city and in some respects unique. The total cost of the section illustrated in detail was 648,000 dollars (£133,900), and of the other block rather less; together, roughly, a quarter of a million sterling, which is exclusive of the central pavilion. The site was city property.

The front of this half of the building sets back from the roadway of the quay at Whitehall Street. It measures 260 feet, but wings on the water front make that façade 60 feet longer. The return flanks are about 170 feet. Part of the area is on shore, and part over the water. It provides for docking three boats at one time, in slips numbered 1, 2, and 3 on plan.

Ground Plan (*marked "first floor" as generally adopted in the United States*).

Fig. 2 shows the ground floor plan as divided longitudinally by a driveway 40 feet wide, and by two transverse driveways 51 feet wide, leading to the hinged platforms by which vehicles have access to the lower deck of the boats. Passengers enter from the street by two vestibules, which open into a large waiting-room, with ticket-office, smoking-room, news and other booths—inevitably including

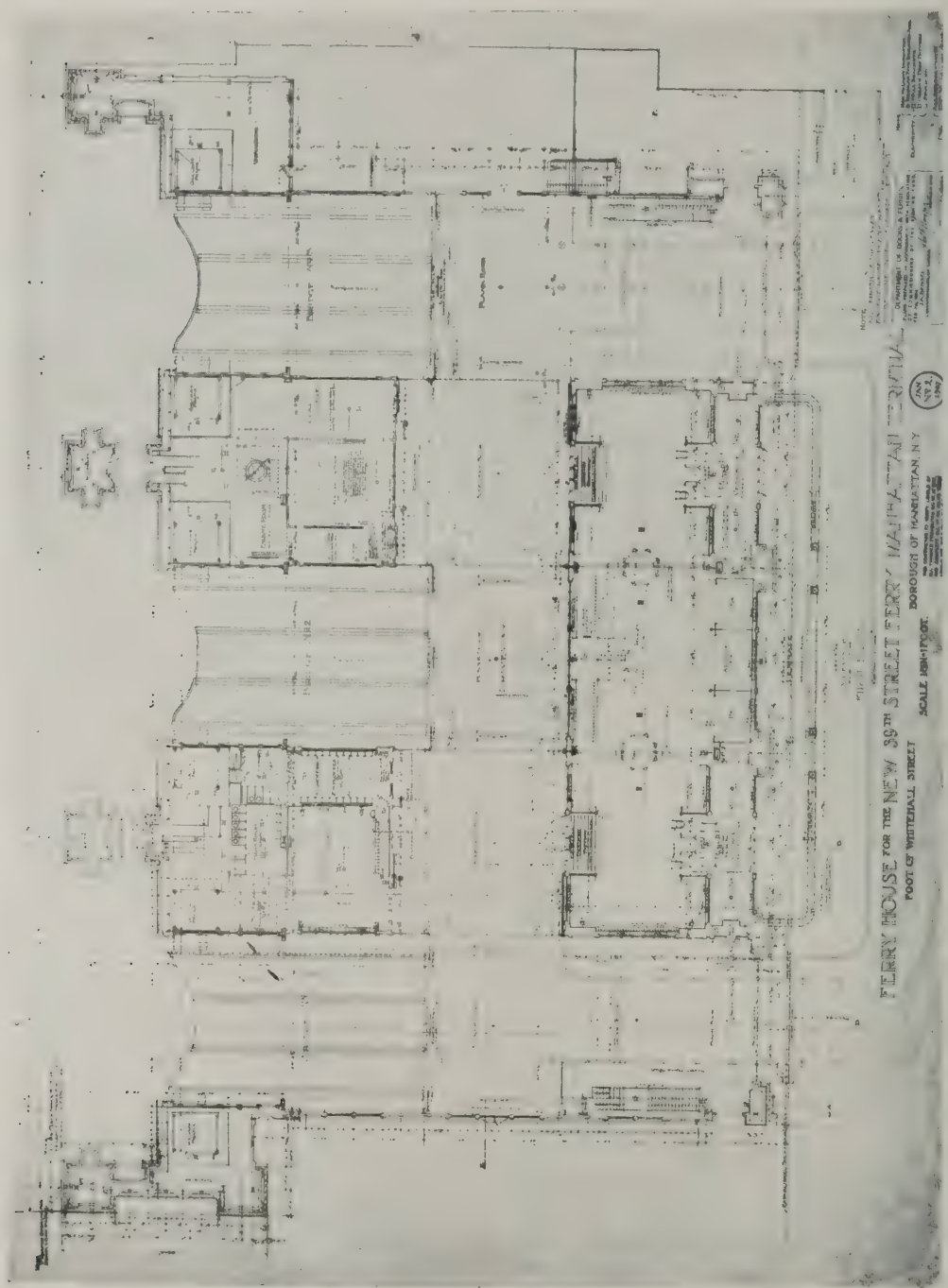


FIG. 2.—GROUND FLOOR PLAN.

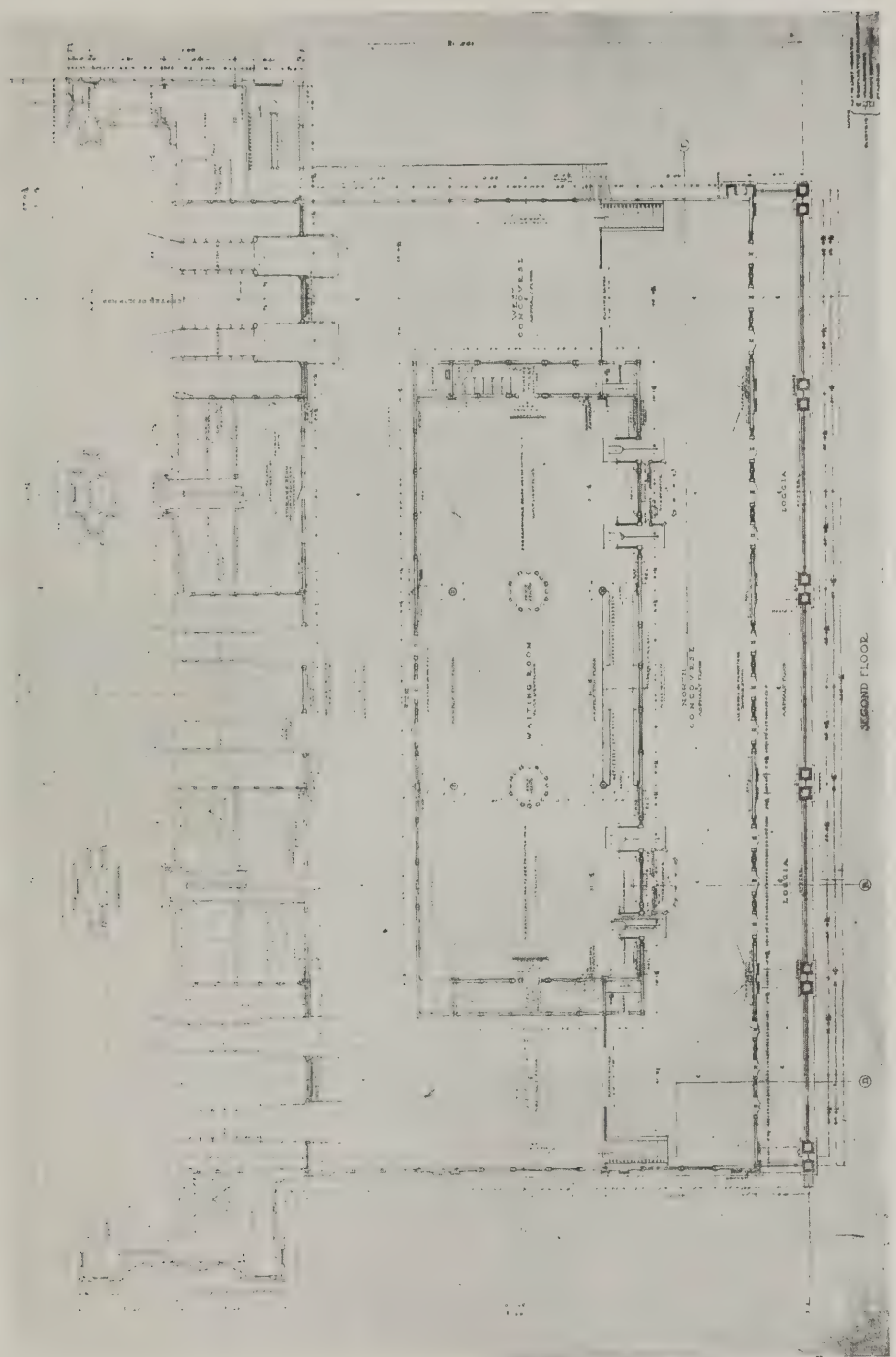


FIG. 3.—FIRST FLOOR PLAN.

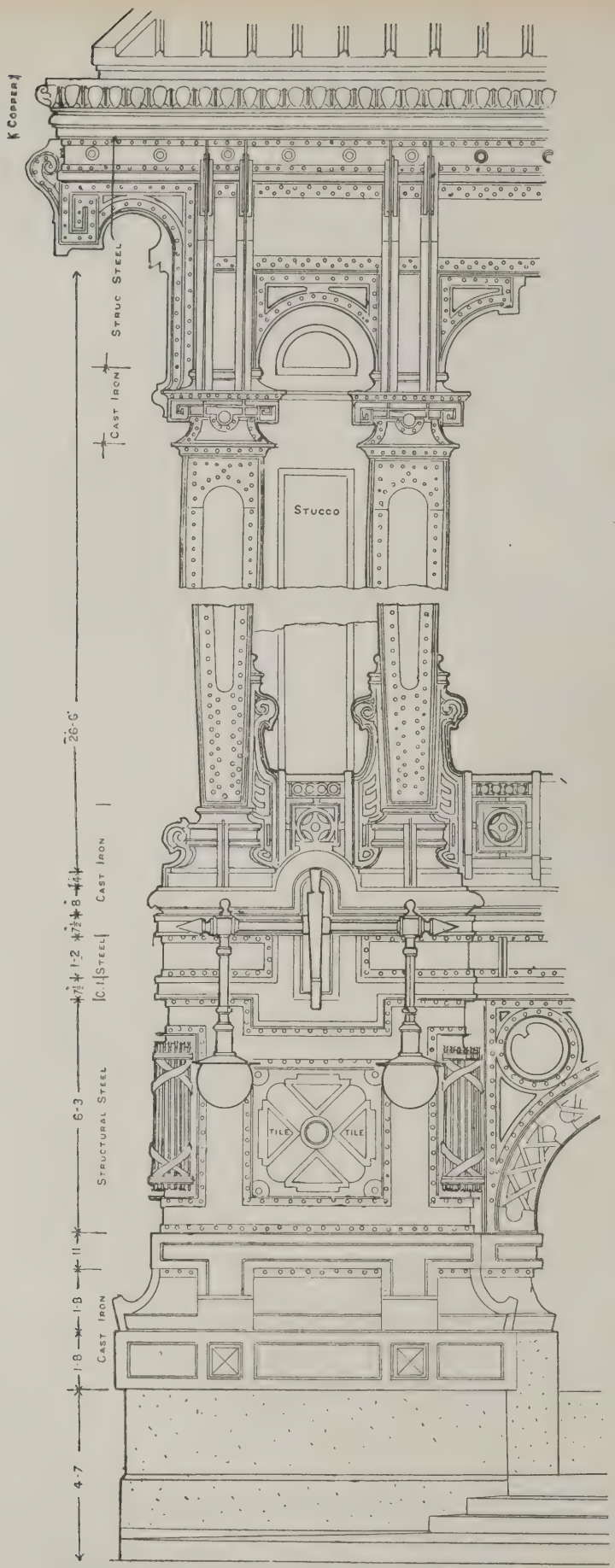


FIG. 4.—ANGLE PIER.

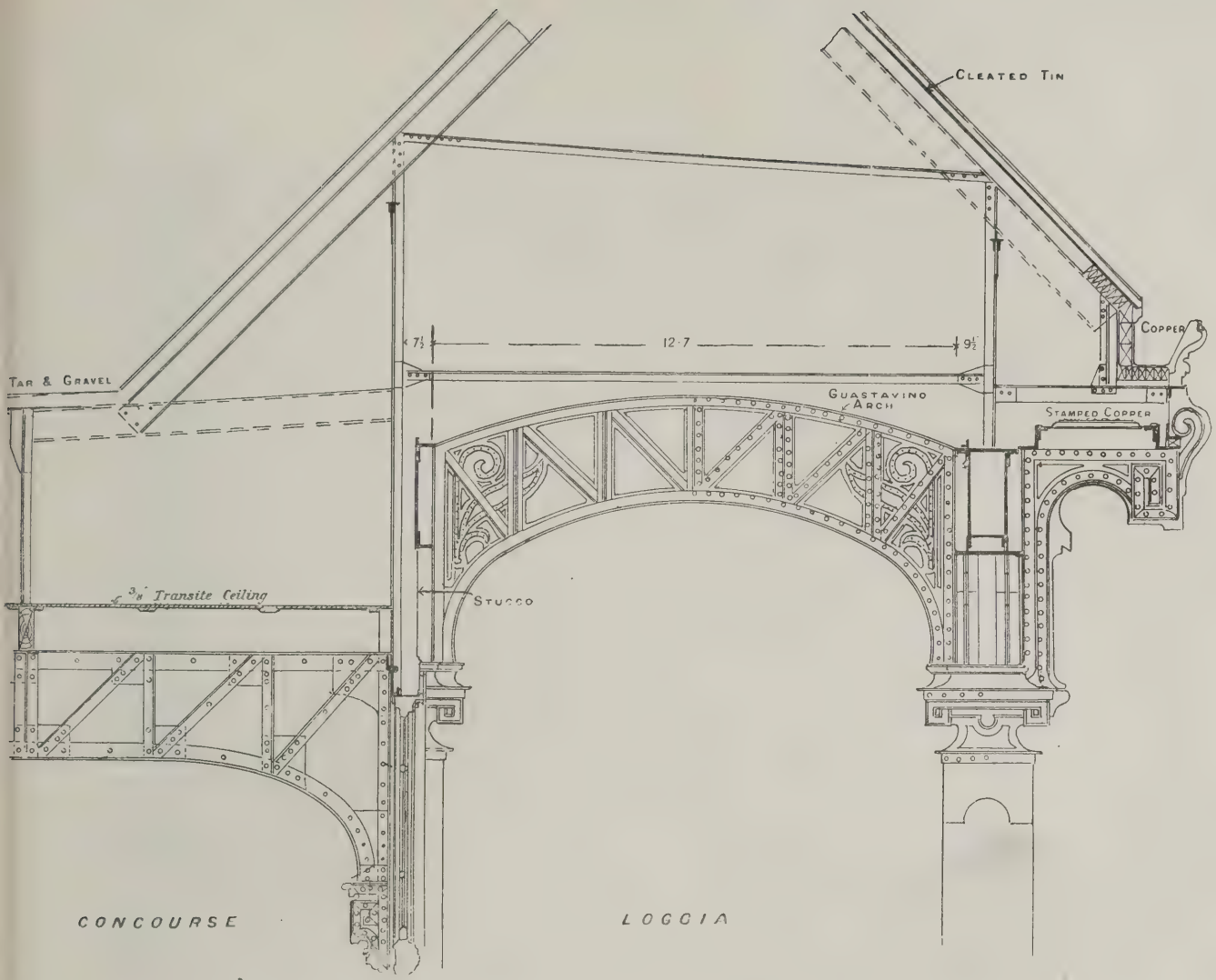


FIG. 5.—CROSS SECTION OF LOGGIA, AND PART OF CONCOURSE ROOFS.

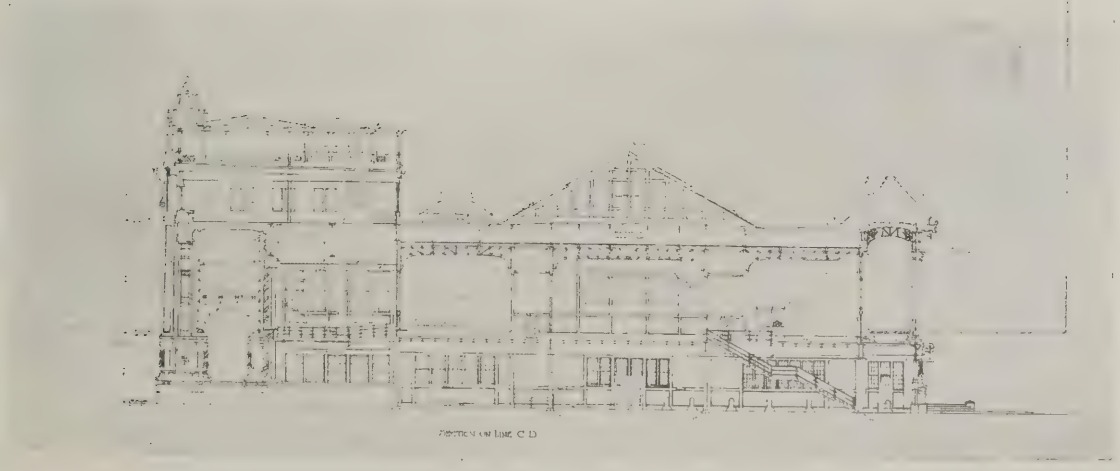


FIG. 6.—TRANSVERSE SECTION.

FIG. 7.—LOGGIA, WITH VEHICLE AND PASSENGER ENTRANCE BELOW. STREET FRONT, FROM S.W. ANGLE.

FIG. 8.—PART OF WATER-FRONT, OFFICES, AND PERGOLA ON ROOF.

cigars and "candy." The engine and boiler rooms, dynamos and storage, &c., are arranged at the back on this level, as there is no basement. The pitch is 16 feet 6 inches to the furred-down ceiling, which is formed of cement and lime plaster on wire-lath.

First Floor Plan ("*second floor*" *nominally*).

The first floor (see plan, fig. 3) comprises a fine central waiting-room 170 by 60 feet, lighted by skylight and borrowed lights. The height is 25 feet to the panelled plaster ceiling. The ticket-office, toilet-rooms, and booths are adjacent thereto. A concourse or foyer ceiled with transite slabs entirely encircles the waiting-room. Opening from this on the river side are three pairs of hinged bridges 11 feet wide giving access for passengers to the upper deck of the boats. These bridges rise and fall to suit the tide.

A balcony or loggia floored with asphalte, and entirely under cover, runs the entire length of the street front, and is reached from the concourse by double sash-doors. It is 15 feet wide, and is connected with the Elevated Street Railways, to which it gives direct access.

It is this loggia which most clearly reveals the steel construction, as shown geometrically by figs. 4 and 5 to a larger scale. Beneath the cleated tin roof with its galvanised iron cresting is a Guastavino tile ceiling or vault of segmental section, beyond which there is a projecting cornice and soffit of stamped copper, carried on steel brackets at the verge of the roof.

Large cast-iron mullioned frames glazed with rib-rolled glass, having oak inner frames and doors, form the front of the building. Between these, the connecting wall (stuccoed outside and inside with cement stucco) is formed of two stretches of wire-lath with air-space between. On the outer surface, the lath is completely embedded, by being rendered from within and without, and the lath is attached to both faces of I-shaped steel stancheons.

Second Floor Plan ("*third floor*" *nominally*).

This story is faced with stamped copper. The area is extended riverwards 60 feet by bridging over the slips upon elliptical arches, thereby providing for a range of well-lighted offices for the Dock Board's staff. This is a new feature in this class of building. The 45,000 square feet of floor space so utilised would be letable at about £13,000 per annum, calculated at a dollar and a half per foot rent per annum, an average for office rent in the neighbourhood.

Roof and Promenade.

The roof over these offices, 60 feet above the river, is to serve as a public Recreation Pier, 60 feet wide. Upon it is raised a pergola which may form one of the features of a roof garden. When the two new blocks are united by the addition of the central pavilion, the promenade will be 720 feet long, and will doubtless be crowded on cool evenings by the residents of a densely populated quarter, on account of the fine view and fresh breeze from the Atlantic. Staircases and elevators will be provided in the central block for easy access.

A flat roof of lighter construction covers the rest of this level, and is broken up by the large skylight which lights the waiting-room below.

A transverse section is given in fig. 6.

General Construction.

Steel.—This important part is worked out by the engineer in conjunction with the architect. The columns vary in size. The larger ones are 25 inches square, built up of channel and plate steel riveted together. The main floor-girders vary in depth from 8 inches I to 45 inches box-shape.

The bases along the water front rest upon thick concrete piers set over wooden piles, driven into the bed until rock bottom is reached. The landward bases rest also on concrete piers going down to rock, which is here from 20 to 30 feet below the surface.

The series of low elliptical arches which carry the loggia start from a pink granite base. The half-inch scale detail (fig. 4) shows one of the angle piers of the building on the street front. The coupled columns have applied cast-iron bases and panels below. The base moulding starts from an unpolished hewn granite plinth. The wrought spandril of the nearest elliptical steel arch which carries the loggia floor is shown. The columns taper downwards from necking to base. Ornamental steel brackets support the soffit. The detail (fig. 5) shows the roof over the loggia and half of the adjoining concourse.

Intermediate walls on this floor are stuccoed, on the formation before described, and the interior partitions are of terra-cotta blocks.

Stairs.—These are of cast-iron with ornamental balustrade. The treads are of rubber-tile on iron.

Floors.—The spaces between the girders of the first floor are filled in with slabs of reinforced cement-concrete, finished with "marbleite" (a terrazzo made up as square tiles) in the waiting-rooms; asphalte finish in the concourse, and granolithic, or yellow pine battens, elsewhere.

The longitudinal (centre) driveway paving is of asphalte, and the transverse ones of wood blocks. There are raised wood side-walks for passengers along the driveway.

Ceilings.—On the ground-floor the ceiling is furred down by wire-lath and plastered. It is flat in the vestibules, but in the waiting-room is in bays of flat segmental form. On the first floor the ceiling is formed of transite slab panels over the concourse. This material is largely employed in this kind of structure for its fire-resisting properties. A flat plaster ceiling divided by cross-beams is used in the waiting-room. The loggia outside is of

Guastavino tile, as before described.* The offices &c. on second floor are of plain plaster.

Roofs.—That part of the main roof which is flat and intended for a promenade is covered with 12″ × 6″ × 1″ Welsh red tiles, set in cement on ash concrete. The other part is of lighter construction, viz. spruce battens, 5 inches by 3 inches, set edgewise, close together. They are waterproofed with layers of tarred felt, and spread over with tar and fine slag and sand, known as "gravel-roofing." This has a life of about fifteen years, though it is stated that some have been kept for twice that period in an efficient state with but trifling attention. The contractor guarantees it for ten years.

Skylight.—A continuous skylight, 156 feet long, with provision for ventilation, lights the first floor waiting-room. It is span-shape, glazed with wire-glass, but at the ceiling level is sub-divided into three bays of ornamental glass ceiling-lights, each 40 feet by 30 feet.

Interior fittings.—The walls of the waiting-rooms on both floors have panelled oak dados, with high pilasters dividing them into bays. The doors, ticket-office enclosures, seats, &c., are of the same wood. The intermediate plaster surfaces, panelled with wood mouldings, are tinted in quiet tones.

Ornamental Cast-iron.—The caps and bases of the columns of this material are merely adjuncts to the structural steel, to which they are attached. Scroll-brackets unite vertical and horizontal features. The structural brackets, however, are wrought steel "angle-iron," of which the shapes are seen on the details, figs. 4 and 5 showing their resemblance to the coupled columns of the corner of the street front.

On the water façade, cast-iron and stamped metal is more extensively employed for the piers, arches, spandrils, and fascia, &c., and need not be fuller described, but brackets and main lines are steel. The view, fig. 8, shows half of two of the bays on the water front, with pier between.

In the interior the circular columns of the upper waiting-room, 29 feet 6 inches high, are simply treated. Restraint is shown in the caps, and a suggestion of the rectangular treatment of the volutes of the exterior caps is apparent. Only in the superposed trusses has the designer allowed himself more freedom in an acanthus-leaf adjunct.

Lighting.—This is by electric current from the Edison Company, but dynamos are provided for on the premises for future use. The wires are carried in galvanised iron conduits.

Heating is provided by hot-water pipes.

Faïence.—A diaper arrangement of glazed blue tiles fills the spandrils of the arches on the river front, and a border of the same surrounds the large cast-iron window-frames of the loggia. In the Guastavino vault of the same feature, buff, red, and blue glaze is adopted for the surface of the tiles.

Drawings, &c.—The plans are fully detailed, and covered with explanatory notes and data. This is a general practice in America, which is the more necessary from the universal use of blue-prints. It largely reduces the bulk of the specifications by showing incidentals of the work described at the point to which they apply, thus saving much diversion in research for information during execution.

The General Contractors were the Snare and Triest Company, of Liberty Street, New York; but, according to the practice in the United States, sub-contractors are recognised, and were employed for woodwork, plaster, heating, lighting, &c. Mr. C. W. Staniford, the Engineer to the Department of Docks and Ferries, supervised for that body.

My thanks are due to Mr. R. E. Walker, of the late firm of Walker & Morris, for the loan of drawings, and for furnishing particulars of the work; and to the proprietors of *Architecture and Building* for photographs showing the features at large.

Although the extended use of reinforced-concrete has reduced the opportunities expected to arise some years ago for the artistic treatment of exposed wrought-iron or steel construction, there is a field for it still, chiefly in such work as span-roofs of railway and other termini, riding schools, bridges, &c. In the United States particularly there appear to be good opportunities for following up artistic steel-work design, more especially in Gothic, as used, *e.g.*, in the great Riding School at West Point Military Station, N.Y., recently carried out by Messrs. Cram, Goodhue, and Ferguson. In England, the attempt seemed to culminate with the Oxford University Museum, as if the designers were startled at "the exuberance of their own verbosity"—to borrow a famous political phrase. Yet no style lends itself so well to sober and effective treatment in wrought-metal work, and England is not poor in ancient typical examples for inspiration even for heavy work. Perhaps, when the present rage for the use of alien styles for English buildings is superseded by a return to the traditions of our fathers, the culture of beautiful metal work on other lines than hardware may revive. Meanwhile, any attempt to use metal artistically in a structural way, in accordance with truth, and not on lines suggesting another material, is worthy of the careful attention of architects at a time when some of them are not only using concrete in imitation of stone, but reproducing parts of ancient buildings in reinforced concrete.

* Introduced into the U.S. by a Spanish architect of that name, who formed a company for its manufacture. The tiles are of porous terra-cotta, 12 inches by 6 inches by 1½ inch, corrugated both sides and laid breaking joint; the number of thicknesses in an arch depending upon the span and weight to be carried. In exposed soffits the tiles are usually glazed and coloured, and laid herring-bone, forming an effective surface for church and other domes and vaults, of great strength, with extreme lightness and economy combined.

REVIEWS.

THE RENAISSANCE.

A History of Architectural Development.—Vol. III. The Renaissance in Italy, France, and England. By F. M. Simpson, Professor of Architecture in the University of London. 8o. Lond. 1911. *Price* 21*s. net.* [*Longmans, Green & Co.,* 39 *Paternoster Row.*]

When ten years ago Professor Simpson undertook to write a *History of Architectural Development*, he placed all architectural students under a deep obligation. Up to that period Fergusson was still the one considerable authority available for consultation on the general history of architecture; but half a century of research, carried by specialists into every branch of the subject, had tended to make many of Fergusson's statements wholly or partly obsolete, while from the necessarily altered point of view of our generation much of his criticism appeared to fall wide of the mark. In these circumstances it was not unnatural that more than one attempt should be made to retell the tale in the light of fresh evidence and from a more congenial standpoint. Professor Simpson's book coincided roughly in its appearance with one of a similar kind by Dr. Russell Sturgis, each setting out to cover the ground in three volumes. The American work had a few years' start of the English, but owing to the regretted death of the author it is not yet completed. In spite of a general similarity of aim, there is, however, sufficient difference of scope and method between the two publications to justify the parallel existence of both and to make them both welcome. Dr. Sturgis's scheme is the more ambitious, embracing all the architecture of the world; Professor Simpson confines himself to the architecture of Europe and that of the Near East, with which it is inseparably bound up. The space apportioned by the two authors to various provinces of their vast subject-matter is also very different. Dr. Sturgis devotes his entire first volume to Antiquity, and his second brings the narrative down to the close of the Romanesque period, leaving the whole of the Gothic, Renaissance, and Modern Styles for the third; while Professor Simpson reaches the year 1000 A.D. in his first, the end of Gothic in his second, and modern times in his third. The latter work also differs considerably in supplementing the chronological narrative by large sections devoted to the comparative discussion of methods of construction and design in different countries and periods. It is a question whether the two methods can be combined altogether satisfactorily in one work without involving overlapping at some points and inadequate treatment in others, and though this may occasionally be the case in Prof. Simpson's work, his comparative chapters are unquestionably a very useful adjunct, while the lessons which, in accordance with the promise of his original preface, he often turns aside to draw on questions of design from the examples under discussion will prove valuable to young students in provoking thought, even if they do not always command their agreement.

HOUSES IN LA PLACE, LANNION.

The third volume which is now before us is at least equal in interest and value to its predecessors, and the author is heartily to be congratulated on the completion of his arduous task. He modestly apologises for the delay in appearance, but anyone who considers for a moment the vast range of study and the immense labour in the selection and arrangement of material which these three volumes represent will wonder that he has been able to compress them, side by side with professional and educational activities, into so short a period as ten years.

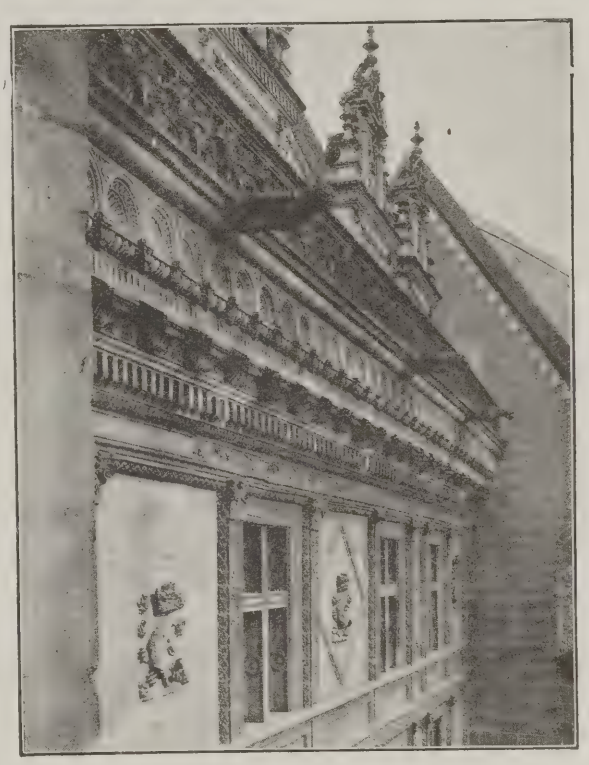
The architecture of the Renaissance is, according to an epigram in Professor Lethaby's recent brilliant essay *Architecture*, "the art of an age of indigestion." It is far from clear what this cryptic utterance is intended to mean; but anyone who reads Professor Simpson's pages and studies the admirable illustrations that enrich them is more likely in this dyspeptic era to be filled with envy of the excellent digestion of that which followed the Middle Ages. An age which devoured all Roman

architecture it could lay hands on, with Vitruvius into the bargain—a tough morsel if ever there was one—and yet, so far from sinking into postprandial torpor, developed on the contrary an artistic activity seldom paralleled in history, covering Europe within a very short period with works of an altogether new character and of astonishing variety, seems rather to give proof of very satisfactory powers of assimilation.

Professor Simpson does not attempt to deal with the entire output of the Renaissance and of the styles which derive from it. Though in the previous volume Romanesque and Gothic developments were traced in Germany, Spain, and the Netherlands, these countries are left out of count in the one before us. For this limitation of the subject lack of space as well as their less complete appropriation of the artistic side of the movement is pleaded. Although many of the phenomena of the Renaissance in those countries are undoubtedly of considerable interest, and their omission entails a less complete fulfilment of the promise of the title, it was probably a wise decision to restrict the scope of the volume, since it could not be enlarged, and contains little, if anything, which we could well spare to Italy, France, and England.

The chronological period dealt with varies considerably in the three sections. In Italy it terminates virtually before the end of the seventeenth century; in France with the Panthéon, though one page is devoted to subsequent developments; while in England a short chapter brings the story from 1770 down to our own day. These dates are in themselves sufficient to show that the author is free from the prejudices which make so many historians hold up their hands in pious horror on reaching a period which they are pleased to label decadent, and refuse to poison the mind of the young person with a description of it. Indeed, both in the Italian and French sections he has sound words of advice, recommending the study of the so-called barocco and rococo as not devoid of useful lessons. The faults of this class of architecture are, as he says, on the surface, and it needs no great penetration to discover them, but if the student will take the trouble to overcome his distaste for tricks of detail and ornament which have ceased to tickle the palate, he will often find solid qualities of design behind them. Though something is said to rehabilitate the styles in question, the writer has evidently judged that they lay too far outside his subject to need precise definition or detailed analysis. Some day these black sheep will be readmitted to the fold, even of general histories, and a serious attempt will be made to clear up the obscurity in which the origin of their curious grammar of design is still shrouded; but it will be impossible to do so without carrying the inquiry into countries outside Italy, where many of their most typical examples are to be found.

The bulk of the present volume is naturally concerned with the earlier and more vital phases of the Renaissance, and more particularly its formative period in the three countries. In this treatment of national styles the narrative method holds a larger place than in the mediæval volume, and necessarily so, since structural methods are of less paramount importance in their development, and discussions on such matters as piers, vaulting, and so forth are no longer necessary. Yet the comparative method is not altogether excluded, and we have to thank Professor Simpson for a very full and interesting chapter on the development of Renaissance church design in Italy with special reference to planning,

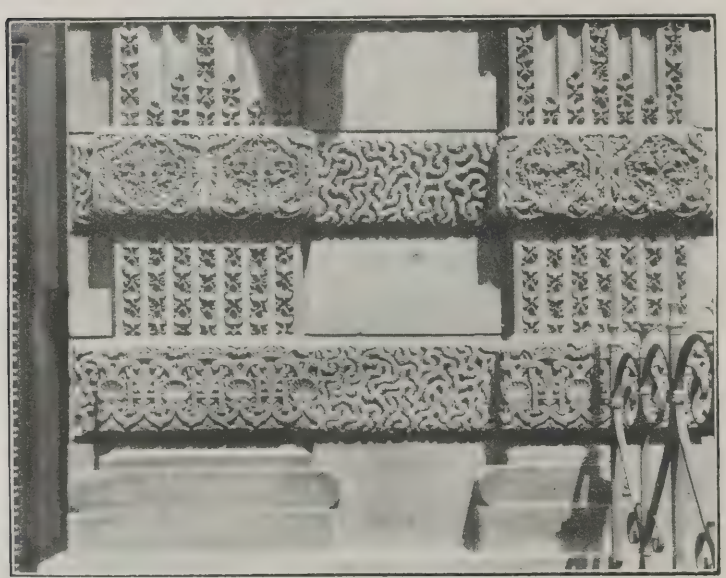


CHÂTEAU DE BLOIS : CORNICES OF SOUTH SIDE OF COURT.

which is fully illustrated and whose great variety and ingenuity is fully brought out. This is followed by a shorter chapter on the design and construction of the dome, that beautiful means of expression whose reintroduction is one of the most acceptable gifts of the Renaissance to European architecture. The opportunity is here seized of overstepping national frontiers, and comparing amongst others five of the world's great domes in Florence, Rome, Paris, and London.

In the earlier portion of the volume—nearly half of the whole—which Professor Simpson devotes to the Italian Renaissance, he has a difficult task. For the ground is already covered by the late W. J. Anderson's brilliant and inspiring monograph, with

which—being of approximately the same bulk—he inevitably challenges comparison. If he issues from the ordeal with honour, as he undoubtedly does, Anderson's work is not thereby superseded, for it will be many a day before that is possible. But the two works are complementary, and, written from different points of view, will prove useful companions to each other. The subject is of so vital an interest and of so varied a character as to be practically inexhaustible, and in telling the tale once more Professor Simpson contrives to put things in a new way, and to throw fresh light on certain aspects of the movement. The analysis of designs and features and of the methods employed by various architects and schools to produce their effects is a very useful feature, and in the course of it the writer has occasion to continue successfully the vindication begun by J. A. Symonds and Anderson of sundry devices which had been an object of attack on the part of Mid-Victorian critics.



DETAIL OF PILASTERS, SOUTH FRONT OF THE LOUVRE.

While the early chapters in which the origins of the Renaissance are discussed, the special conditions in Florence described, and the story of the early Florentine Renaissance told in detail, are well worthy of the subject, it is perhaps in the one dealing with the spread of the Renaissance in northern Italy that we find most new matter. The change from an almost austere reticence to relative exuberance which is met with in passing from Tuscany to Upper Italy, and its attribution to the greater variety of the existing local architecture, is an oft-told tale, but Professor Simpson brings out more clearly than is always done the further conditions which led to this diversity of results. While insisting strongly on the exclusively Florentine origin of the movement, he shows how the Florentine artists who went to work in Lombardy and Venetia, emancipated as they were by their many-sided *bottega* training, were there confronted by powerful building guilds, whose members were not so ready to adopt innovations, and who, in eventually adopting them, perpetuated many of their own traditions—Gothic, Romanesque, or Byzantine—which thus appear in a new dress. Again, the influence of local Roman remains, and in particular the Porta de' Borsari at Verona, with its marked departures from the purer classical manner of the principal monuments in Rome itself, is held—and no doubt rightly—to have been responsible for much that differentiates the Lombardo-Venetian from the Tuscan types.

In another chapter—rather oddly named "The Centenary of the Renaissance"—a very interesting account of the so-called Roman Renaissance is given. This brings out the point that, while the movement was again almost exclusively due to the initiative of natives of Florence and more or less neighbouring cities, such as Siena and Urbino, and architects of Roman birth had little or nothing to do with the matter, there is yet much justification for the name as applied to this mature phase. For it was founded, in a fuller sense than hitherto, on the study of ancient Roman monuments, and it flowered in Rome as a consequence of the attraction exercised by the Papal Court, whose enlightened patronage secured from all quarters the best available talent for the rebuilding of St. Peter's and the beautification of the city by means of public works and private mansions. Here, as in the earlier sections, we find many old friends, but, in addition, we are given welcome descriptions and illustrations of less known but not less instructive examples, such as the Palazzi Maccarani and Sacchetti, and the house of Angelo Massimi, often thrown into the background by the greater claims of its neighbour, the house of Pietro Massimi.

Both the Italian and English Renaissance have claims to ample exposition, the former for its world-wide, the latter for its national importance. The parallel movement in France, making the latter claim not at all, and the former in a less degree, comes in for a relatively meagre treatment. Since in no country outside Italy did the Renaissance meet with such sympathetic acceptance, or its architectural development run such a consistent and continuous course—a course almost unbroken

down to the present day, it is a little disappointing to find it dismissed in two chapters. The division into "Early Renaissance" and "Architecture of the Louis" is, however, a reasonable one, though it may seem disproportionate to devote over thirty pages to the sixteenth century, and only twenty-five to the seventeenth and eighteenth, thus leaving but scant space for describing the strangely diverse phases of style, which, with a strong substratum of unchanging national tradition, are associated with the names of each of the four last Louis and the curious series of reactions which they exhibit. Yet within the narrow limits to which Professor Simpson has confined himself he has succeeded in giving a picture, which, if it lacks definition as regards points of detail, is essentially a true and fair one, of the broad aspects of the movement, abounding in pointed and instructive remarks. Thus of the architecture of the age of Henri IV. he says: "It has been accused of being grotesque and overflorid. Those who like prettiness find it dull; others who clamour for purity proclaim it debased. As a rule it is none of these things. Its qualities may be negative rather than positive, but its proportions and scale are good, the designs generally show ideas worth consideration, and the carving is always of a high order." That is excellent, so are these passages on the eighteenth century: "The work of the time of Louis XV. has got a bad name, but it does not deserve it. The term 'Louis Quinze' is often applied to anything that is twisted and distorted in form and overflorid in decoration. . . . The real thing is very different. The buildings—externally, at least—err in being too plain, if that is an error. Their façades are so simple they are easily passed by. But a little attention bestowed upon them is well repaid. Then their beauties reveal themselves one by one." "The French architects of the eighteenth century thoroughly realised that a good plan is as much a work of art as a good elevation." "To turn over the pages of [French] seventeenth and eighteenth century books on architecture is in itself a liberal education."

From a drawing by Leslie Wilkinson.

The closing section of the volume gives a clear and admirably sane account of our national Renaissance. The immaturity and crudely florid character of much of the Elizabethan work are fully recognised, and accounted for by the ignorance of our craftsmen, cut off as they were from the best models by the breach with Rome, and thus thrown

either upon their own resources or upon those of Flemish and German pattern-books. But Professor Simpson steers clear of the tendency of recent years to belittle the pre-Inigoites unduly, and does full justice to the really fine qualities which their work not unfrequently exhibits—qualities often more essentially of the Renaissance, where Renaissance detail and ornament is least in evidence, as, for instance, in the noble front of Moyns Hall, Suffolk, which he illustrates—a building which could not have arisen in any country but England: so admirable in its balance and proportions, so gay with its ample fenestration, yet so reticent and reposeful. Reticence and balance such as this is, however, rare in our earlier Renaissance architecture as it is among the Elizabethans in literature. But after their lyrical and somewhat disorderly exuberance came the ordered march of Milton's stately numbers. Inigo Jones, who turned his back on the conceits and euphuisms of his contemporaries, and deliberately aimed at replacing such adventitious charms by breadth and reasoned proportions, may be called the Milton of English architecture, and the work of both men is rich with the spoils of a riper scholarship than is to be found in the age that preceded them. Professor Simpson gives us an excellent sketch of Jones's epoch-making innovations and of their results, as traceable in the works of his younger contemporaries, of Wren and his followers. In a chapter entitled "A Century of British Architects" he ably brings out the special qualities which distinguish the work of our principal masters of the eighteenth century, and a brief survey of the main trend of our architecture in the nineteenth brings this very notable contribution to the "Architects' Library" to its close.

From a drawing by Leslie Wilkinson.

The figures and plates comprise many drawings and photographs by the author. Among those contributed by others, several beautiful sketches, such as those of Santa Maria di Loreto and Santa Maria in Campitelli in Rome by Mr. Leslie Wilkinson, deserve special commendation. Plans are particu-

larly abundant. The comparative sheets, such as those giving the early plans of St. Peter's and the plans of a number of Wren's city churches and the elevation of three of his steeples, are very welcome. It would have been an advantage if three or four of his designs for St. Paul's could all have been shown to a uniform scale on one page.

Provided as it is with illustrations both good in themselves of their respective kinds and well chosen with reference to the text, and containing so much good matter lucidly and judiciously presented, Professor Simpson's completed work cannot fail to meet with general appreciation or to find a wide sphere of usefulness.

W. H. Ward [*A.*].

CEMENT WORK AS A CRAFT.

Ornamental Cement Work. By Oliver Wheatley. With 81 *illustrations.* 8o. *Lond.* 1912. *Price* 5*s. net.* [*Scott, Greenwood & Son,* 8 *Broadway, Ludgate Hill, E.C.*]

According to the preface of this book, which is dated June 1911, "the inventor of Portland cement is still living, Mr. Isaac C. Johnson, of Gravesend, aged 100 years." Beyond this item there is in the book very little that is of interest to architects. The illustrations are of unequal quality, some being worthy of a place in a book that is addressed to artists, while others are not so. There is evidence that the author knows a lot about cement and a little about ornament. It is clear that he takes a very keen interest in his subject, but the result of his effort to write a book about it is distinctly odd. As a fair sample of its manner, take the following from page 19: "The garden is confessedly a subject for design, and it is cement more than any other substance which can execute the fancy of the designer." A quaint suggestion occurs on pp. 73 and 77: "Figs. 40 and 41 (examples of Gothic capitals) are in addition usable as detail for friezes or stringcourses, and although originating as detail of a Gothic church, there is no reason why they should not form the frieze of a classic architrave, since it is a harmony of light and shade in all cases that is the essential." Here is a whole paragraph from pp. 92 and 93: "The designer habituated to the combination of a range of materials is sensible of the value of forms such as those which architecture supplies. They form the lines of connexion and structure as evidenced by the effect produced by the introduction of a balustraded terrace and steps, fountain, and garden wall; and it is when accompanied by such things as those the garden offers, that architecture is seen at its best. Unassociated with other things architecture has no meaning, it is its use which brings it to life. In use it is the consummation of the arts." Doubtless the author knows what he means by this, and doubtless he means well, but it is not easy to make head or tail of it. J. Nixon Horsfield [*A.*].

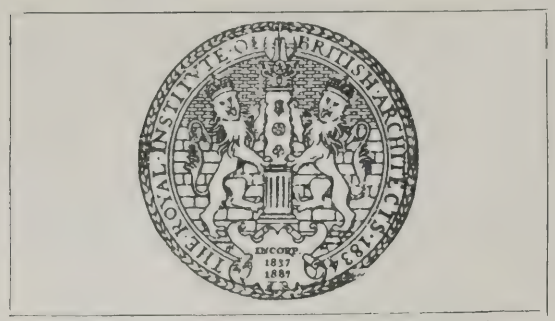
MOSQUE OF EL ZAHIR, CAIRO.

In the Institute Journal of December 1910, two sketches of mine were published representing the west and south portals of the Mosque of El Zahir (or El Dahir) in Cairo. In the west portal the arch is carved with what is known as the cushion voussoir, of which the earliest example is that found in the tower of the Martorana Church in Palermo; in the south portal the arch is carved with the chevron; and I suggested that they were probably the work of the Sicilian masons who were sent to Palestine to build the Crusaders' churches, and may afterwards, or their successors, have gone over to Cairo and have been employed in the decoration of the mosques there. I thought also that they might date from the twelfth century, Mr. Jeffery, however, in his letter of April 1911, considered the mosque might have been built by the Zaheree Sultans of Egypt in the fifteenth century, and regretted I had not given any account of the mosque. It seemed to me so impossible that the tradition of this Norman decoration should have been handed down to the fifteenth century that I wrote to Mr. Ernest Richmond, who was then in Cairo, and subsequently to M. Max Herz Bey, the architect of the Committee for the Restoration of Ancient Buildings in Cairo, asking for information as to its date. According to M. Herz Bey, the mosque was built by the Sultan Beibars (El Bou-doukdari), who reigned from 1260–77. The mosque, which was built extra-muros, is shown on the plan of the French expedition and is there called "Fort Schulkowsky," the name of a favourite General of Napoleon, who converted the mosque into barracks. The plan and other drawings of the Mosque are given in Prisse d'Avennes' "L'Art Arabe d'après les Monuments du Caire," which also states that it was built by the Sultan Beibars, and that, according to Makrizy, an Arab writer, the mosque was completed in 1278, which accords with the date given by M. Herz Bey. Prisse d'Avennes adds a drawing of the third or north portal and gives restorations of the whole mosque, which was of great size and importance. It measured approximately about 260 ft. square; there was a prayer chamber on the eastern side of six aisles, about 102 ft. deep, and a central court with double aisles on the north, west, and south sides. Since its desecration by Napoleon and its conversion into barracks it is no longer possible to enter it, but the three external portals are fine examples of the Saracenic style of the thirteenth century. R. Phené Spiers [*F.*].

Books received.

Early Christian Art in Ireland. By Margaret Stokes, revised by G. N. Count Plunkett, F.S.A. 8o. Dublin. 1911. Price 1*s.* National Museum of Science and Art, Dublin.

L'Architecture Religieuse en France à l'Epoque Romane: ses Origines, son développement. By R. de Lasteyrie, Membre de l'Institut. 4o. Paris, 1912. Librairie Alphonse Picard et fils, 82 rue Bonaparte, Paris.



9 Conduit Street, London, W., *9th March* 1912.

COMPETITIONS.

Warrington: Oakwood Avenue Council School Competition.

Blackwood Hall Competition.

Members and Licentiates of the Royal Institute of British Architects must not take part in either of the above competitions, because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.

By order of the Council,

Ian MacAlister, *Secretary R.I.B.A.*

CHRONICLE.

BUSINESS GENERAL MEETING, 4th MARCH.

Mr. Leonard Stokes, *President,* in the Chair.

[Trial was made at this meeting of the method of seating in the meeting-room proposed by Mr. Alan E. Munby [*A.*] in the Journal for 27th January, p. 226. General approval was expressed of the new arrangement, and it was agreed to continue it for a few meetings as an experiment, except on occasions when lantern slides are shown, when the old system must be reverted to.]

The Question of Registration.

The minutes of the previous meeting having been confirmed, Mr. Maurice B. Adams [*F.*] referred to the announcement in the last issue of the Journal [p. 298] that the Council had appointed a committee to consider the whole question of Registration, and asked the following question, of which he had given notice: "Whether it is the policy of the Council to postpone further consideration on the part of members of the Institute as to incorporating the Society of Architects till after the Committee appointed to take evidence on the question of Registration has made its report; and whether the appointment of this Committee to take evidence as to Registration implies that the Council considers the matter to be still an open question, seeing that the Institute, as a body, has already committed itself to the policy of promoting a Bill before Parliament for the Statutory Enrolment of Practising Architects?"

The President replied: The Council do not consider that the question of Registration is still an open question. We consider that the Institute and the Council are bound by the resolutions passed on the 4th March 1907. As to the Council's proposals of the 8th January, these having been referred back for further consideration, the Council have appointed a strong Committee to consider the matter and report to them on the subject. The Council will in due course report to the General Body.

Representation of Associates on the Council.

Mr. Horace T. Bonner [*A.*], at the same meeting, brought forward the following Resolution standing in his name on the notice-paper:—

"That it be an instruction to the Council that in any future or amended Charter, or By-laws under such future or amended Charter, an equal number of Fellows and Associates be elected to such Council, exclusive of the President, four Vice-Presidents, and Hon. Secretary or Secretaries; and that only one list of candidates eligible for election to such Council shall be printed and issued at one date prior to such election containing the names, addresses, and qualifications of all candidates duly nominated for such election."

Speaking to the motion, Mr. Bonner said: In bringing this proposal before the meeting let me assure you that I have no personal interest to serve. I am merely bringing it forward on behalf of the class to which I belong, a class among which, the fact cannot be concealed, there has been for some time a growing sense of dissatisfaction and unrest. The Associates feel, and, I think, perhaps justly, that they as a class are not at all properly represented on the Council. I am sure that the Council will, as they always have done hitherto, consider, and I trust adopt, our very reasonable suggestions. Many Associates have expressed their opinions in the professional Press, but no one hitherto has brought the matter to a head by presenting any proposal to the Council with regard to their complaints, whether real or imaginary. Why, then, blame the Council? At least let us approach them with some tangible and logical suggestion, which I am sure will receive that courteous attention which I have always found the Council ready to give to every question. Although I have mentioned the Charter in the resolution, this question does not really affect the Charter at all. Clause 14 of the Charter says: "There shall always be a Council of the Royal Institute, which Council shall consist of the President, the Vice-Presidents, the one or more Honorary Secretaries, and of other members"—"other members," gentlemen; bear that in mind—"to be elected at a general meeting of the Royal Institute in such manner and at such times as By-laws may from time to time prescribe." There is no question there of the class of members; no distinction is made as to whether they are to be Fellows or whether they are to be Associates. Naturally we look to have the most eminent Fellows we can get, and we are proud of them, and glad to have them within the walls of the Institute. We must have such men as the representative men of our great profession. At the same time, we (the Associates) do feel that we are left a little bit in the cold. As I have shown, this question is not touched in the Charter; it is therefore the By-laws that we want the Council to take into consideration. Under the By-laws no Associate is entitled to vote in respect of the formation of a new By-law. Therefore my resolution is put forward as a recommendation or instruction to the Council to consider the proposal. I am sorry there are not more members here to-night. From the letters I have received, I had thought that this was a matter of great interest, but unfortunately there are many members who make a great deal of fuss outside, but, evidently lacking the courage of their convictions, they never come up to the scratch at the finish. One gentleman

has written to *The Builder* suggesting twenty-four Associates; but I think that was going a little beyond the mark. By the courtesy of the Secretary I have been favoured with the actual number of members as from the 1st January last. They are as follows: Fellows, 866; Associates, 1,555—making a total of 2,421; with the Licentiates, 1,738, making a grand total of 4,159. Now our Council consists of 28 members, of whom only 6 are Associates. Surely we have some logical ground for arguing that this number should be augmented. I think we should have an equal number of lay representatives, apart from the President and Vice-Presidents. I think it is better—as is the case with all institutions and committees that I have been concerned with—for all parties to be evenly balanced. You are then more likely to get better work. Men take a greater interest when they know that the sides are evenly balanced; it makes them attend to their duties more, for by missing a meeting they may lose the object and discussion of some important matter in which they are interested. This is not a question of equality of age or of attainment; it is a question of equality of membership and of voting power; an equality which we have a perfect right to have. I am sure that when the Council take this matter into consideration they will see that we are only asking for what is fair, viz., representation by voting power. This is not an attacking question, nor is it two important questions combined, as was the case in an important discussion recently. It is a very simple question, and one which, I think, will appeal not only to the Associates, but to the good sense and good feeling of the Fellows as well. In conclusion, I can hardly do better than quote from an article on the subject in this week's *Builder*, which says: "The suggestion"—that is, the resolution—"inevitably presents itself that the more the interests and privileges of its members coincide, and the fewer those interests and privileges are, the easier it will be for the Institute to act in the public interest"—that means really the interests of the members—"with promptitude and decision, and so carry out the intentions and discharge the obligations of its Charter." Until I came into this building to-night I had no seconder, but I knew I could find a seconder among my class of Associates, and Mr. Gammell has kindly consented to second this proposition. I am very pleased to have had the opportunity of bringing this matter before you, which, as you know, was referred from an earlier period when there was more important business to be discussed. I thank the meeting for their attention to my few remarks, and I am sure that, after consideration, they will carry this resolution, and that the Council will then favourably consider it.

Mr. K. Gammell [*A.*]: At Mr. Bonner's request, I rise to second this resolution. Before giving my reason for supporting it I should like to explain my position in the matter. Beyond receiving a letter from Mr. Bonner asking me to formally second this resolution, I have had no communication with him at all. And in reply to his request I wrote that a recent attack of influenza might prevent my attendance for reasons of health, and that I therefore thought it better not to formally accede to it. I also ventured to suggest to him to adopt the policy I had always myself followed when raising any matter by resolution in this room, which was to leave it to some member to second the resolution if it suggested itself as a good one. Personally speaking, I have never failed in finding a seconder. Without pleading guilty to any duplicity, there was another reason for not acceding to Mr. Bonner's request: I was in entire ignorance as to how he would convey himself to the meeting. It might have been that he would adopt some words, or some tone, which would have been objectionable to me, in which case I should have taken the earliest opportunity of dissociating myself entirely from the resolution. But I think Mr. Bonner is to be congratulated on the fair way in which he has put it. He has exercised a considerable amount of reticence, and has spoken according to his lights. Before offering the primary reason which brings me into the room to-night, I would like to say that I particularly wish to avoid the expression of any opinion which is capable of misinterpretation, and I do not wish to give any offence where none is intended. With regard to this resolution, I have listened very attentively to Mr. Bonner's remarks, and I feel myself in agreement with a great deal of what he has said. I do not know that I accept every one of his points. He has also adversely criticised myself, because I was the person who wrote the letter he alluded to. But that does not prevent my being in sympathy with the majority of his remarks, though I think he has missed the most important point of all. In the January number of *The Builder*, the New Year number, in the leading article, which I think had for its title "The Policy of the R.I.B.A.," amongst a number of editorial comments there appeared the following: "In so far as the Associate class represents the younger and better educated members of the Institute"—those are the words of *The Builder*—"and so far as their discontent voices the eternal conflict between the new ideas and the old, we may say at once that we sympathise with their feelings. Although we cannot associate ourselves with everything said by our correspondents—indeed, we must expressly disassociate ourselves from certain of their remarks—we cannot disguise from ourselves that the Council of the Institute has laid itself open to them, has not always been representative of the best elements in the profession, or as conspicuous as it should be in the forefront of progress." Those are the comments of the editor of *The Builder*. I venture to think that is a rather strong indictment, and when you consider that it proceeds from the editor of one of the most widely-read and respected professional journals, I think it can be claimed that it carries very considerable weight.

The President: May I ask you to explain whether the indictment is against the Council, or against the members who elect the Council?

Mr. Gammell: May I point out to you, Sir, that I am not rising to answer questions without notice? If you remember, in addition to the statement I have just made, that the respected editor of the *Builder* is a Fellow of this Institute, and furthermore, unless I am misinformed, a member of the Council, I think those in authority would be well advised, in the best interests of the Institute, seriously and sympathetically to consider the resolution which has been proposed by Mr. Bonner. In answer to that article I am going, on account of Mr. Bonner's reference to my remark, to read you what I said in the reply at the end of a letter which, by the courtesy of the editor, I was able to have published in the *Builder*: "Then, Sir, holding this opinion, and strongly, I would postulate the following proposition as one well calculated to advance the best interests of the R.I.B.A., viz.:—That the ranks of the Council should, by a speedily-passed By-law, be increased by the inclusion of at least twenty-four Associates of the standing and qualification suggested in your expression of opinion. Such men, standing in a position midway between the successful close of a matured professional career, on the one hand, and the hope—but generally not commission—ful aspirations of the newest created Associate, would, in the opinion of many others besides myself, be much 'better fitted' and more likely to 'hold the scales level' than would or could (by virtue of the disability I have suggested)

those of the 'superior class.'" There you have the frank confession of the faith which has brought me, somewhat reluctantly, into this room to-night. I could speak on this particular matter at considerable length; it is one which I have been considering, probably in common with many others here, for a very long time, so that it does not represent a sudden opinion. I have no doubt there are other members present besides myself who have views, and it would be unfair to take up too much of the time of this meeting. In order that I may make myself perfectly clear, I shall venture to recapitulate the primary reason which has led me to support this resolution. I ask your indulgence, because it is a repetition. The opinion of the editor of the *Builder* reads as follows, and that is what I ask your attention to: "We cannot disguise from ourselves that the Council of the Institute has laid itself open to the adverse criticism of the younger members of the Institute." Without the context it does not make sufficient sense, but I think the passage is a statement of fact. In addition to that, the statement is made that it has not always been representative of the best elements in the profession, and lastly, has not always been as conspicuous as it should have been in the forefront of progress. One more word, Sir, and I have finished. The question may be raised, would the adoption of this resolution as part of our practical politics—I am sorry to use the word politics, but it is the only word which seems to me apposite in the present instance—tend in any way to improve matters? To answer that question I am afraid I should have to sing the praises of the particular class to which I belong, and that I think would be both invidious and undesirable. I will therefore take my seat by formally seconding this resolution.

The PRESIDENT: Did I understand, Mr. Bonner, that you would be satisfied with this matter receiving the careful consideration of the Council? If so, the Council would undertake to carefully consider your proposal. I will promise on their behalf that they will do so.

Mr. BONNER: We should naturally expect it would be considered in any event. What we want is that the resolution should be carried into effect. If it is to be merely considered and then pigeon-holed for the rest of the ages, it is hardly of any use for us to discuss it. We bring this proposal forward in the hope of having some satisfactory answer. We are in an awkward position. We can carry this resolution, but we cannot enforce the alteration of By-laws. I ask you to give the matter full consideration. But we must ask also for some definite result. We cannot be quite satisfied if it merely goes before you and is discussed, and is then, as they say in the House of Commons, "laid on the table." We must press for some definite reply to our request.

The PRESIDENT: I can pledge myself that you shall have a reply, but I cannot pledge that it shall be in the affirmative.

Mr. R. J. ANGEL, M.Inst.C.E. [*A.*]: I had not intended to say anything on this matter, but being connected in one way and another with public Boards, I see probably the weak point, which you yourself, Sir, have laid your finger upon. I have known of subjects being considered but never being reported upon till the body which has made the reference cannot do anything. I would suggest, if it is possible, that the resolution be considered by the Council and be reported upon to the general body, so that the general body may have the opportunity of considering the views of the Council and taking what action they think fit upon it. I should not like an important resolution of this kind to be simply shelved, because there still exists what some of the Associates think a weakness in the representation of their class upon the Council; that is to say, it would be considered in the proportion of 22 to 6, making 28. The 6 would have no voice in that matter.

The PRESIDENT: Your numbers are not quite correct; there are 42 members of the Council, including those who represent the Allied Societies.

Mr. HERBERT SHEPHERD [*A.*]: All those must necessarily be Fellows of the Institute. There are 24 Members of the Council who are alluded to in one of the By-laws as Ordinary Members of Council, and they come up for election every year. Of those, only 6 are Associates.

Mr. ANGEL: Take the Ordinary Members of Council, 18 Fellows and 6 Associates, there still exists that weakness. The Associates are overpowered, even in the consideration of this subject. I have often felt—silently, for I have never expressed it—that the Associates are lamentably *mis*-represented on the Council. And when this same resolution is being considered they will be completely out-voiced and out-voted. I certainly think, Sir, an important resolution of this kind ought not only to be considered, as I know it will be, but in addition it should be reported upon to us, and the voice of the general body be taken upon it; because many things are considered, and matters are looked at through two different pairs of spectacles. The spectacles which the Fellow Member of the Council looks through are quite a different pair from that which the Associate looks through. We each have our own way of looking at things, and, to use a well-known couplet,

"One man's word is no man's word,
Justice demands that both be heard."

We want both sides to have an equal hearing on matters which affect both sides, and for that reason I hope that when it is considered by the Council it will be reported upon.

The PRESIDENT: The Council will consider it, and report before the end of the Session, if that will satisfy Mr. Bonner.

Mr. BONNER: My resolution makes this an instruction to the Council, and if we give an instruction we look for a definite reply. May we take it in that form?

Mr. FRANK LISHMAN [*A.*]: I did not come to the meeting with the intention of speaking upon this matter; I came to support Mr. Perks's motion which is coming up later. But the half-hearted way in which the resolution has been proposed, and the not very much more energetic way in which it has been seconded, make me think that it may, if it goes as a mere recommendation to the Council, go without the force of a resolution. If this is to be formally proposed as an instruction to the Council it will very likely be defeated by a considerable majority, because the instruction to the Council that the Associates should be represented equally with the Fellows seems to me absolutely absurd. Therefore, if it is to go as something for the Council to consider seriously, it would probably result in their just considering it and doing nothing else. There would simply be a reference back in about three weeks' time, or three months, as the case may be. But if this were put in the nature of an amendment that the Council do seriously consider the advisability of increasing the number of Associates on the Council, then something might be done towards meeting the real intentions of the proposition, and it would be much more likely to have the support of this meeting. I shall venture, therefore, on the spur of the moment, to make a suggestion that the number of Associates on the Council be increased by, say, half as many again,

bringing it up to nine, or something like that. If it is in order, I will propose that as an amendment.

Mr. EDWARD GREENOP [*A.*]: It has been ruled from the Chair that you cannot put forward a proposal as an instruction to the Council. I cannot tell you why, but that was the ruling against me when I proposed a resolution in similar terms. It was altered to recommendation on that ground.

Mr. EDWIN T. HALL [*F.*]: I am rather loth to intervene in this matter, because I happen to belong to that dreadful class the Fellows, and there appears to be some suggestion that the Fellows, being in the majority on the Council, have not that wisdom that they would have if they had the superior youth of the Associates to guide them. But I am sure the Associates will agree with me when I say this: that it is the hope, it was always the expectation, that when Associates became eligible they should take up their Fellowship, when they would enjoy every privilege that membership of this Institute brings, and would also be able to give their wisdom and guidance to the affairs of this Institute. Someone behind reminds me there is a difference of subscription. But, Sir, if the privileges of the Fellowship are worth anything, they are worth the extra two guineas per annum subscription. May I take it that as a rule—of course there are exceptions—but as a rule the Associates are the juniors of this Institute? They have all the privilege which we have lost of having a great future before them. But it has been the custom, not only here, but in every body, every commercial undertaking, in any corporation which deals with large subjects such as we have to deal with, that the senior members are generally the directors: for this simple reason, that you want to get all the benefit of the experience which, whatever the ability of the man, can only be attained by years of work. So that in the management of a great Institute like this, where there are all kinds of subjects affecting the profession to which we are all proud to belong, it has always been reasonable that the senior members should be the directing men in order to give their ripe experience for the benefit of the Institute. But it is also desirable that the Associates should have a voice on the Council; and I am sure every Associate Member of the Council knows that he is welcomed at the Council not only as an equal with every man who sits there, but that he is listened to with the greatest possible respect and with the greatest possible sympathy when he brings forward any subject whatever at the Council meetings. Well now, that being the case, is it reasonable to ask that, as one gentleman suggested, 24 members of the Council should be Associates, when there are only 18 Fellows and 6 Associates now as ordinary members of Council? Either you would make a very unwieldy Council, or you would wipe out the Fellows and place Associates in their stead. I do not think that even the youngest Associate in this room would say that that was wisdom. They would say that we want the experience and benefit of the ripe and older men. I would remind this meeting that it was only three years ago when, by agreement with the Associates, their numbers on the Council were increased from four to six, when they were made one-fourth of the whole elected Council, as distinguished from the office-holders. Only three years ago, by agreement with the Associates, that was fixed as the right and proper proportion. Thus we had the great benefit of having the young blood to assist our, shall I say, less exuberant energies, and we also had the experience, and, as it was hoped, the wisdom of the senior members to assist them. It is not only the energy of youth that is required, but it is the wisdom to see the necessity of the barriers which is required, and therefore it is that the proportions agreed upon three years ago were considered the right proportions. I venture to think that every Associate of this Institute would say that was a fair and reasonable proportion, because he wants to have the benefit of the experience of his seniors. On its merits, therefore, I would suggest that this is not a proposal to bring forward. We regret very much that Mr. Bonner is not a Fellow of this Institute; his age, his experience, his wisdom, and his moderate way of putting things, make it a regret to us that he is not a Fellow. He can amend that at any moment. I submit that this is not a proposal which should be pressed, and that it is in the best interests of the Institute that the matter should be left as it was settled only three years ago.

Mr. GAMMELL: May I put it to you, Sir, that Mr. Lishman's amendment has never been formally seconded?

The PRESIDENT: I am quite aware of that; neither has it been spoken to.

Mr. W. HENRY WHITE [*F.*]: I do not want to add fuel to the fire which seems to be smouldering somewhere, but I think it might be pointed out that, after all, the Council are elected by all the members of the Institute, and that if the Associates wish their views represented more strongly than they imagine they are represented at present, all they have to do is to find out the 6 Associates and 18 Fellows who are in sympathy with their views, and elect them. They would then have that full recognition and representation which it is in their hands to obtain at any time. With reference to the proposal of my old friend Mr. Bonner, I would also like to point out that the complaint is merely a statement. I was expecting that we should hear that on such and such occasions some definite kind of suggestion was made or could be made that on some particular matter the Associates were badly represented—that they had been badly treated. I am one of the younger Fellows, and therefore my whole sympathy is with the younger men of the profession, and if I thought any Fellow was going to be elected to the Council who would not take into the fullest possible consideration all the desires of the Associates, I would not vote for him. And every member of this Institute is in exactly the same position. I heartily sympathise with Mr. Hall's statement; I think it is a reasonable and logical expression of the position, and that it should appeal to everyone present.

Mr. HERBERT SHEPHERD [*A.*]: I think I can place myself in order by formally seconding this amendment.

The PRESIDENT: No, you are too late.

Mr. SHEPHERD: I wanted to say that my friend Mr. Hall, if he will allow me that distinction, advances exactly the same arguments now as he advanced three years ago against the two Associate Members being added to the Council when the By-laws were being passed. I suggest to Mr. Hall to cast his mind back to that time; he distinctly told us then, in the room upstairs, and they were the very reasons which he again advances to-night why this should not be done. And how can he say that that was an agreement? It was the very opposite, I venture to say.

Mr. HALL: The agreement was carried by a vote of the general meeting.

Mr. H. HARDWICKE LANGSTON [*A.*]: A peculiar argument has been used as to how to serve the Associates. Mr. Hall says become Fellows. But that is not representing the Associates.

Mr. MAURICE B. ADAMS [*F.*]: That is true, but this Institute can never be constitutionally healthy while there are so many men getting on in years who simply are content to remain in the junior class. It is of no use beating about the bush; there are many men constantly coming here and posing as the representatives of the junior class, whereas they ought to represent

fairly and properly the senior class. Why do they not come in? Is it because they wish to evade the extra two guineas, or do they think the Institute is only worth just what they pay? You are on the horns of a dilemma, because either you feel that the Institute is not worth more than you pay, or you should come in and feel it a privilege to advance in the ranks. Directly I was eligible I felt it my duty to become a Fellow, and I cannot understand why many of my old friends, whom I see here year in and year out, winter and summer, do not do the same; then their grievances would cease. Let the young men become Fellows; that is the only way in which we can prosper. We want the sinews of war; we want the advantage of your experience and your views. You seem rather to pride yourselves on having a grievance. ("No, no.") I have been on the Council, and I can honestly say that whenever there was a question affecting the Associates it was always received with the utmost consideration. It is the only way to make a society healthy by bringing forward the young men, and I do appeal to those gentlemen who brought this motion forward to simply view it in the way in which I venture to put it, instead of airing these grievances and perpetually being on the alert for something to find fault with. ("No, no.")

Mr. ANGEL: Many of them are not in practice.

Mr. LANGSTON: It is not a grievance; it is the proportion on the Council which is being discussed.

Mr. S. DOUGLAS TOPLEY [*A.*]: Reference having been made to the young Associates, with your indulgence I may perhaps be allowed to say a word. May I at once dissociate myself from the opinions expressed by my colleagues in the Associate class? It is probable that this matter will be considered by the Council, and therefore I think it would be very unfortunate if they should do so under the idea that the Associates are solid on the question. With many of the admirable arguments which have been laid before you I am in entire agreement, but at the same time I have been waiting for any Associate to point out that the Council, being elected, represents not the classes but the members as a whole. I think that is a point which has been entirely overlooked by many Associates, and a most unfortunate distinction arises in one's mind in differentiating between Associates and Fellows. The Council, presumably, consists of those gentlemen whom the general body of members believe to be best fitted to watch the interests of this Institute. It does seem most unfortunate that we should consider these matters as between Associates and Fellows. I express that opinion in order that it may be known that such an opinion exists among several Associates, who, unfortunately, are not present this evening, but who approach the subject from the point of view I have indicated.

The PRESIDENT: As Mr. Adams says, on the Council we never think of making a distinction between a Fellow and an Associate. For myself, I do not think I always know the Associate Members, and frequently mistake them for Fellows.

Mr. BONNER: Mr. Hall suggests that we should right the wrongs of the Associates by making them Fellows. It puts me in mind of the French princess who, when she was told that people wanted bread, replied, "Give them buns." So Mr. Hall says, if you are not satisfied as Associates, become Fellows. Cannot we vote on the resolution, Sir?

The PRESIDENT: I think not. The words of the Charter run: "Provided always that no Associate shall be entitled to vote in respect of the making and adopting of By-laws." Note the words "In respect of." The resolution looks to me very much like something in respect of.

Mr. BONNER: I will stick to my reading of "Instruction." Can we get over it in that way?

The PRESIDENT: No.

Mr. LISHMAN: My amendment——

The PRESIDENT: Your amendment was seconded too late, and consequently fell through.

Mr. W. R. DAVIDGE [*A.*]: I ask Mr. Bonner not to press his resolution, but to leave it in this way, that we are anxious that the Council should give the matter their consideration. I am sure that no one would wish to take a one-sided vote upon the matter. If the meeting will pass to the next business, I am sure we may feel, after the President's assurance, that the matter will be considered and reported to the general body of members.

The PRESIDENT: If Mr. Bonner will accept that, I will pledge myself that it shall be considered and reported to the meeting.

Mr. BONNER: I must accept it if the matter cannot be put to the vote.

Mr. H. W. CUBITT [*A.*]: We appear very helpless as Associates. It is held to be a question of By-law, and that we cannot vote on it. But if Associates as a body are of the opinion that their membership on the Council should be increased, they are not helpless entirely; they could amend the Charter, presumably, so as to have the representation they desire on the Council definitely set forth. I do not suppose we should want to do it, but it is well to emphasise the fact that we are not in so bad a position as appears from the fizzling out of these proceedings.

The PRESIDENT: We must go on our Charter and By-laws as they stand. That is the only thing to do, and the only safe position to take up.

Reports of Proceedings at Business Meetings.

Mr. SYDNEY PERKS, F.S.A. [*F.*], at the same meeting proposed the following resolution in accordance with notice: "That every speech delivered at any Business Meeting shall be published in the JOURNAL at the earliest date after the meeting, subject only to revision by the author, and that the Council be requested to take the necessary steps to carry out this resolution." To that he wished to add these words: "If the Editor is of opinion that any words are libellous, they shall not be printed."

Speaking to the motion, Mr. Perks said: The cause of my putting this motion down was connected with a meeting held last year. Nobody here is responsible for it, because the Council of last year has ceased to exist. But early last year an important Business Meeting was held, and it has never been reported. I think that is a very great pity, to put it mildly. I think that all our meetings ought to be reported, because we have something over 2,400 Fellows and Associates, and I think only about 350 members can possibly get into this room. There are also geographical reasons. Country members cannot come to our meetings often, and they are very anxious, naturally, to know what takes place here, and we like them to have full information. Again, our JOURNAL is the only means of letting them know, because the Press are not admitted to Business Meetings, and unless members see a report in the JOURNAL they do not know what happens, because the Minutes do not convey the reasons given by the speakers. What I claim is that we should have free speech for all. If we make speeches at a Business Meeting, it is the only means we have of speaking to our country members and to any other members who are not present. This matter was debated in the Practice Committee when I brought it forward, and a similar resolution was carried, without a single vote against it. It was thought, and I think everybody else must think,

that it is a good idea. All we want is to have our speeches properly reported, and at the earliest possible date. I have no grievance against anybody, certainly not against the Council, and I think that is proved by the fact that a member of the Council, Mr. Woodward, has very kindly consented to second this motion. I do not think any alteration of a By-law is necessary; it is simply a question of instructions to the officers.

The PRESIDENT: Have you looked at the By-laws, Mr. Perks?

Mr. PERKS: Yes, I have, Sir, but they do not prevent your giving instructions to your officers. If this is carried it is simply a matter of direction to the officers; it is not a question of altering a By-law, and I have dropped that idea altogether, because if things like this crop up and we have to alter our By-laws every time, it will be a most cumbersome proceeding, and it is altogether unnecessary for the present purpose. In the place I am connected with we have such things as Standing Orders, Orders of Common Council, and Standing Orders to the officers to do certain things, and they have to do them, or else they are asked the reason why. I cannot imagine any reasons or arguments against my proposal; it is a perfectly matter-of-fact and straightforward thing to do, and it used to be done in the Institute as far back as I can trace. Then speeches were reported automatically, and the proof was sent out automatically to the author, shortly after the meeting, and he corrected the proof and sent it back. Until the meeting of last year I believe I am correct in stating there was no precedent for the suppression of a report of a meeting. I was not present at the meeting; I wanted to know what took place, and I turned up the JOURNAL and tried to find it, but the debate was not reported at all. It was that which started me to inquire into this matter. If there are any arguments against this proposition, I shall be most happy to hear them, and I shall have a chance of dealing with them in my reply. I hope the matter as I have put it commends itself to everybody, and I shall ask my friend Mr. Woodward to kindly second it.

Mr. WM. WOODWARD [*F.*]: I rise to second this motion, and I am very glad that my friend Mr. Perks has altered it in the direction which he has indicated, because as it originally stood I could not have supported it. I can only ask him, if he will, to alter the word "Editor" to "Chairman," for this reason, that By-law 61 says, with reference to Business Meetings—and we are only dealing with Business Meetings now—"such proceedings shall be private, and shall not be communicated to the public Press without the written consent of the Chairman of the Meeting." I therefore ask Mr. Perks to substitute the word "Chairman" for "Editor." It is only a matter of form, and in making the proposal I am not regardless of the fact that our present Editor is Mr. Northover, and if we always had a man like Mr. Northover with us I do not know that I should propose the substitution of "Chairman" for "Editor." Mr. Northover will understand that. Of course, the meeting will understand the difference between a Business Meeting and an Ordinary Meeting. That differentiation is well set forth in the words I have read. And the reason, no doubt, was this: That, in the first place, Business Meetings are private meetings; and in the next place, being private, you cannot invite others, and nobody but members of the Institute can be present. At these Business Meetings it is customary—at all events it has been so in my experience—for things to be said which have considerable professional interest, sometimes involving slight personalities—the mention of names, for instance, in connection with the doings or misdoings of men connected with the architectural profession. Therefore, the reason why these Business Meetings should be treated differently as regards reporting the speeches is that the Institute, or the speaker, or somebody else, may be, particularly in these days, subject to an action for libel. That has been carefully pointed out to us; and the words which Mr. Perks very properly added provides for that. It now reads that if the matter, in the opinion of the Chairman, is libellous, it shall not be printed in the JOURNAL. My experience, which is of long standing, with regard to reporting in this Institute is this: I was in the position many years ago of uttering things in this Institute which wanted editing, and I was very glad indeed to find they were edited, because what one says in the heat of debate is sometimes ungrammatical, disjointed, and erroneous, and it requires that careful consideration which an editor gives to the matter; and we are ourselves able also to touch up our remarks when we receive the proofs. That is my experience, and I feel I have always been reported quite fully enough. I have made my little disquisition every May for nearly the past twenty years—I do not know whether I shall be allowed to this year—criticising the Council and its Report, and pretty well every word has been printed, though in small type, I admit! However, there it is. The object Mr. Perks has in view, as I understand, is this, that we shall report fully the speeches made by every member of this Institute—and for a very good reason. Take this Business Meeting; there are perhaps one hundred members present. The JOURNAL circulates amongst two or three thousand of our members; as has been truly stated, it is the only means members who cannot attend have of knowing what is going on here; and I venture to think that what goes on at the Business Meetings of this Institute is of considerable value to our provincial brethren. Without disregard to the By-law, I think Mr. Perks will be satisfied, and I shall be satisfied, if there is a clear understanding that speeches delivered at Business Meetings shall be, subject only to the elimination of libellous matter, reported as fully as possible. I have much pleasure in seconding the resolution.

The PRESIDENT: There were two meetings which were not very fully reported because they related largely to another society, and we thought it was hardly fair to them to publish a verbatim report. With those exceptions the speeches have always been reported practically verbatim. They are touched up a little by the author, or by the Editor, if he thinks they are on rather dangerous ground and that certain expressions would be better expurgated.

Mr. PERKS: I thought it was only one meeting, viz., the meeting of 10th April. The speeches were entirely suppressed; there was no question of editing; a report has never appeared at all. The Minutes have appeared; they must appear. If you could get out of printing the Minutes there might be something in the argument. But I say you ought to print the speeches which are made, and if this resolution is passed it will protect the Council in the future. They will find it very useful, because if other societies suggest the suppression of speeches here, the answer will be, "I am very sorry, but there is no help for it; our officers have a standing order to print all the speeches made at our meetings." I do not want to go very much into the case of the report of 8th January, but a report of that meeting has only just appeared. I understand the reason of its being held back was that it was agreed that the report could not appear until the Society of Architects had held a meeting at which they were to discuss the same matter. If I am wrong you will correct me.

The PRESIDENT: You are quite correct.

Mr. PERKS: What a splendid position the Council would have been in if this regulation I am now moving had been in force! The answer would have been, "We hold a meeting on 8th January, and on the following Saturday our JOURNAL containing the report is published. You can hold your meeting on Tuesday, Wednesday, Thursday, or Friday; you have practically the whole week before you, and you can hold your meeting before our speeches are published." There is the answer to the whole thing. But if you enter into an agreement not to print the speeches until another society has held a certain meeting, that society may hang you up as it likes by refraining from holding that meeting.

The PRESIDENT: They have not had their meeting yet.

Mr. PERKS: Then there is no reason why this report should not have been published on 13th January.

The PRESIDENT: They had been waiting a favourable opportunity for considering the situation.

Mr. PERKS: You have given them a long opportunity, and they could have had the whole week for their meeting. In the meantime you know that these things are reported in the Press. If you could keep them private it would be different. You print a document headed plainly "Strictly private and confidential," but we see editorial notes upon it in the Press expressing views even before our meeting takes place! I submit that that is not right. It may be a smart thing when you have a meeting on 8th January for a newspaper to print a week or so beforehand prejudiced notices and editorial matter taking one side or the other. But I contend that it is wrong.

The PRESIDENT: Let us confine ourselves to the proposition.

Mr. PERKS: I use it as an argument against the suppression of proper reports of our speeches, because improper ones appear, and improper comments before the reports. I have papers here to prove both points.

Mr. EDWIN T. HALL: We must sympathise with Mr. Perks in this matter. It is most improper for any newspaper editor, when he has a private and confidential paper sent to him, to make comments on it, and I am sure no editor would desire to do such a thing. We have heard the explanation of why the report was withheld in these cases, and I would remind Mr. Perks that when diplomatic negotiations are going on between Governments it is the invariable rule to keep the matter confidential until negotiations are concluded. That, in principle, is what we promised the Society of Architects. They asked that we should not prejudice their Meeting by publishing reports of what occurred here.

Mr. PERKS: But you have done it.

Mr. HALL: We intimated to them that the time was getting on when we ought to publish the report, and we got their approval, and it is done. The practice of this Institute is to publish its proceedings. But I think it should not be the instruction that every speech shall be published in full; you will add enormously to the cost of the JOURNAL, and the Institute cannot afford it. It is reasonable that important speeches should be published in full. Mr. Woodward, whom we are delighted to hear, would not wish all that he says to appear in print, though it would add immensely to the interest of the paper. But I strongly support Mr. Perks, because it is the intention and the practice that speeches should be edited. But I would not say that the editing should only be confined to libellous matter, and that with that exception all speeches should be published fully. There must be some discretion exercised, such as is done by the great daily papers, and the more important speeches should take precedence of the less important—for everybody will admit that there are more important and less important speeches at every meeting—but everybody's name should be mentioned who speaks. There should, however, be discretion, even if only on the ground of economy.

Mr. MAURICE B. ADAMS: It would be very unwise to leave this question quite as Mr. Perks and Mr. Woodward have left it, because in that case only libellous things would have to be left out. Surely there are things of a professional character which it is not desirable should be made public; and surely also the Chairman ought to have the right, in consultation with the executive if you like, to decide this or that to be not desirable at the present moment to publish. A man may ask a question which is not exactly libellous, but which might not be in the interests of the profession to publish. Again, if you pass a hard-and-fast rule you will prevent that judicial, I will not say editing, but judicial exclusion of some matter which it would be to the interests of everybody to have excluded. Nobody advocates publicity more than I do, because we live in an absolutely free country, and everybody has a right to express his views, so long as they are decently expressed. But I do think that it would be better that the wording of this resolution should be modified in some way, to give discretion to the Chairman of the meeting, and to the executive. Personally, I feel strongly with Mr. Perks in regard to that particular meeting last year to which he has referred. I was extremely disappointed that no report of it appeared, though this is the first time I have mentioned it. But I did think at the time that it was a great pity. I do not remember at the moment the purport of the meeting, but the impression left upon my mind is such that I sympathise with Mr. Perks in what he said. I was at the meeting, and it was a very important one, and concerned a very large number of members, and I agree it was very unfortunate that a report did not appear, even in abstract. But, for all that, there are things said which it is in the interests of the profession unwise to publish.

The PRESIDENT: It would be a pity to make it obligatory that we should publish everything which is said. Over and over again we want to talk amongst ourselves, and we do not want it to go outside these walls.

Mr. HALL: We could say "Subject to such editing as the Chairman of the meeting may think fit."

Mr. PERKS: No, certainly not.

Mr. HALL: I will propose as an amendment to omit the words added to the Resolution and insert "Subject to such editing as the Chairman of the meeting shall think fit." It is not prudent that everybody should know the private and confidential things which are said in this room. It is the practice in every society that I know, and the decision as to what should appear should be subject to the approval of the Chairman.

Mr. STATHAM: I second Mr. Hall's amendment. There may be things which it is necessary and proper to say in argument here, but which it is not desirable to have in print. Therefore I think Mr. Hall's amendment would put it in a wiser position.

Mr. ANGEL: For general business I agree with Mr. Hall that many things may be said here which it is not always our wish should be made public. But the general sense of the business could be conveyed, and the objectionable matter, whatever it might be, could be left out.

Mr. WOODWARD: It is understood that the proofs are sent to each man who speaks, and he has himself the privilege of eliminating such words as he thinks might be objectionable in print.

The PRESIDENT: They are not always the most discreet people.

Mr. P. M. FRASER: If the Chairman takes upon himself to exclude a statement because he thinks it is libellous, he is, by implication, responsible for the libel if he publishes it.

The PRESIDENT: I believe that is so.

Mr. PERKS: We can say "If the Chairman is of opinion that any words are libellous or indiscreet they shall not be printed."

Mr. HALL: I think it is better to put it as my amendment puts it.

Mr. PERKS: My words cover the matter. I do want to object to giving a free hand to anybody to edit generally. I want to limit this power, and I want to limit it to the Chairman. I do not want the Council or the officers to have a free hand in editing as they like, because it only leads to trouble. Jones's speech is cut down, and Smith's is reported in full, and people complain for years about it, and I want to stop it. The first point which was made about Mr. Woodward's speech was that he would not want his little jokes to appear. Mr. Woodward would be the first to cut them out. In my resolution I say subject to editing by the author of the speech. If anything is indiscreet, a little pressure could be brought on the man who made the speech, and there is no doubt it would come out. If you confine editing to anything in particular I shall be only too happy to agree.

Mr. JEMMETT: I support Mr. Hall's amendment, because the Institute, through its Executive Council, should have the last word as to what should be published in its own JOURNAL. It is not a case of a man speaking in public on political affairs. For myself, I am only too thankful to be as ably edited as most of us are here.

The PRESIDENT: Mr. Hall's amendment, which has been seconded by Mr. Statham, is that the words "subject to such editing as the Chairman should think desirable" shall be substituted for the concluding words of Mr. Perks' motion. Thus amended the resolution would read: "That every speech delivered at any Business Meeting shall be published in the JOURNAL at the earliest date after the meeting, subject to revision by the author and to such editing as the Chairman of the meeting shall think desirable, and that the Council be requested to take the necessary steps to carry out this resolution."

The amendment, having been put to the meeting, was voted upon by show of hands and declared carried. The resolution as amended was then put as the substantive motion and carried without dissent. This concluded the proceedings.

Re Mr. Bonner's Proposal for increasing the number of Associates on the Council.

17 *St. Peter Street, Bedford: 7th March* 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—May I ask you to be so good as to insert this letter in the number of the JOURNAL which contains the report of the Business Meeting of 4th March, my reason being that although taken to task by Mr. F. Lishman (a member of the class to which I belong) and other gentlemen, owing to the rules of debate I was debarred from answering adverse criticisms?

What I desire to make clear is that I do not consider myself as having had any concern with last Monday's meeting other than a formal seconding in answer to an equally formal request, which I felt bound to accede to; in other words, I found myself obliged to accept the position of a second whilst all the time desiring to be in that of a principal.

At a later stage (probably after the Council have reported their finding on this question to the general body) I hope to have this matter raised, as I think, properly, and shall then offer what I hope will be accepted as reasonable arguments, which arguments, I may say, I particularly avoided giving on Monday last.

In the meantime, I would ask all members to whom this is a subject of concern or interest to carefully read the report, especially noting the concluding paragraph of my remarks, which ran as follows: "To answer that question I am afraid I should have to sing the praises of the particular class to which I belong, and that I think would be both invidious and undesirable," and then with equal care noting the tenour of the remarks made by Mr. Edwin T. Hall, who evidently does not believe in the wisdom of that age-old proverb, "Self-praise is no recommendation."—Yours faithfully,

K. GAMMELL.

Prizes and Studentships 1913.

The subjects for the Prizes and Studentships in the gift of the Royal Institute for the year 1913 have now been arranged, and full particulars will be found in the pamphlet issued to members with the current number of the JOURNAL.

THE ESSAY MEDAL AND TWENTY-FIVE GUINEAS, open to British subjects under the age of forty years, will be awarded for the best essay on a subject of architectural interest which may be chosen by each competitor for himself. Competitors will be expected to make a useful contribution to knowledge by accurate research, so that the Essays can be accepted as authoritative statements on the subjects dealt with. Candidates in the Final Examination competing for this Prize may submit their Essay as the thesis required under (*F*) of the Revised Syllabus [see KALENDAR, p. 476].

Hitherto it has been the practice to set a special subject every year for the Essay Prize, but the change indicated above has been decided upon on the recommendation of the Board of Architectural Education, who in a report to the Council expressed the opinion that able and permanently useful original work would probably be forthcoming if candidates were left to choose their own subjects.

THE MEASURED DRAWINGS MEDAL AND TEN GUINEAS, open to British subjects under the age of thirty years, will be awarded for the best Measured Drawings made by the competitor of any important building—Classical or Mediæval—in the United Kingdom or abroad. Candidates may apply to the Records Committee of the Royal Institute for guidance and direction as to subjects.

THE SOANE MEDALLION AND £100, open to British subjects under the age of thirty years, will be awarded for the best design for a Terminal Railway Station, with the main frontage facing an open square or place, and side frontages to wide roadways.

THE PUGIN STUDENTSHIP (SILVER MEDAL AND £40), open to members of the Profession (of all countries) between the ages of eighteen and twenty-five years, and intended for the study of the Mediæval Architecture of Great Britain and Ireland, will be awarded to the competitor who submits the best selection of drawings and testimonials.

THE GODWIN BURSARY (supplemented by the Wimperis Bequest): A SILVER MEDAL AND £65, in-

tended for the study of Modern Architecture Abroad, and open to British subjects without limitation as to age, will be awarded for the best selection of practical working drawings (his own work), or other evidence of special practical knowledge, and testimonials.

The Owen Jones Studentship (Certificate and £100), founded for the encouragement of the study of architecture, more particularly in respect to Ornament and Coloured Decoration, and open to members of the profession under the age of thirty-five years.—Candidates must submit testimonials, with drawings, some of which must be from existing buildings and from other examples, exhibiting their acquaintance with colour decoration and with the leading subjects treated of in Owen Jones's *Grammar of Ornament*.

The Tite Prize (Certificate and £30), open to British subjects under the age of thirty years, will be awarded for the best Design, according to the methods of Palladio, Vignola, Wren, or Chambers, for the Façade of a Royal Palace in a City, and approached by a wide avenue.

The Henry Saxon Snell Prize (£60), open to any member of the Architectural Profession, who may associate with himself any member of the Medical Profession.—The Prize, which was founded for the encouragement of the study of the improved design and construction of Hospitals, Convalescent Homes, and Asylums for the Aged and Infirm Poor, will be awarded for the best Design for a Sanatorium for Consumptives to provide accommodation for 150 men.

The Grissell Prize (Gold Medal and Ten Guineas), for the encouragement of the study of construction, and open to British subjects who have not been in practice more than ten years, will be awarded for the best Design for a Riding School constructed of Steel with the sides and roof partially glazed.

The Arthur Cates Prize (Forty Guineas), founded for the promotion of the study of Architecture, more especially in relation to the application of geometry to vaulting, stability of edifices, and design, and open to British subjects who have passed the Institute Final Examination. Candidates must submit a selection of their Testimonies of Study for the Final Examination, and drawings of subjects of Classical or Renaissance and of Mediæval Architecture.

The Ashpitel Prize (Books value £10), awarded to the student who distinguishes himself most highly in the Final Examination of the current year.

Hampshire Association of Architects.

The South Eastern counties of England have been in the past conspicuously deficient in those local architectural organisations which are so admirable a feature of the profession in other parts of the country. A specially warm welcome will, therefore, be accorded to the Hampshire Association of Architects, which came into existence on Saturday, the 2nd March. A representative meeting of members of the profession, under the presidency of Mr. R. F. Chisholm [*F.*], was held on that day in the rooms of Mr. R. MacDonald Lucas [*F.*], to whose energy the creation of the Association was largely due. The first President of the Association is to be Sir William Portal, Bart., F.S.A., and the first Vice-President, Mr. N. C. H. Nisbett [*A.*]. Mr. R. MacDonald Lucas will act as Hon. Secretary and Treasurer, and Mr. Ingalton Sanders [*Licentiate*] will be his assistant in these duties. Draft rules largely based upon those of the newly formed Northamptonshire Association of Architects were submitted and approved, and the Association will begin its work with about twenty original members. The subscriptions are: Members 10*s*., Associates 5*s*., Associated Craftsmen 5*s*. Any communications with regard to the Association should be addressed to the Hon. Secretary, Mr. R. MacDonald Lucas, of Bar Gate Chambers, Southampton.

Sheffield University: Department of Architecture: Vacation Courses.

At the Department of Architecture at Sheffield University, vacation courses are held at places in which buildings of architectural importance may be studied by means of the making of sketches and measured drawings. Attendance at a certain number of these courses is compulsory for students working for the diploma in Architecture awarded by the University. Easter courses have already been held in Lincoln and Stamford, and Summer Courses in Oxford, Cambridge, and London. The Easter Course is to be held in Bath this year, commencing on 23rd March. Permission has already been obtained to sketch or measure at several important buildings, including the Abbey, Prior Park, Ralph Allen's Tower House, the Banqueting Room of the Guildhall, and No. 24 Queen Square. A visit will be paid to one of the quarries belonging to the Bath Stone firms, and at the beginning of the course a lecture on the Architecture of Bath will be given by Mr. Mowbray A. Green [*F.*]. For the Summer Course a sketching and measuring tour in Northamptonshire will probably be arranged. The advantages of these courses are that permission to sketch and measure a series of important buildings is obtained, all difficulties as to the use and hire of ladders &c. are avoided, and an instructor is present with the students to give such advice and guidance as may be needed. Up to the present, only local students have been admitted, but it has been decided to extend the privilege to other students of architecture. Students make their own arrangements with regard to rooms and board, but particulars of suitable accommodation are supplied to them. Applications should be made to the Lecturer, Mr. W. S. Purchon [*A.*], Sheffield University.

Protection of Historic Buildings.

In the House of Commons on the 6th inst., Mr. King, member for North Somerset, asked the Prime Minister whether he was aware that France and other countries scheduled their ancient buildings and other historic monuments with the object of protecting them as national heirlooms and securing them against vandalism or destruction; and whether he could promise legislation with a similar

object to protect such historic buildings as the Reindeer Hotel, Banbury, now threatened with partial demolition.

Mr. Asquith replied that he was aware of the procedure in France referred to, and that the First Commissioner of his Majesty's Office of Works proposed to introduce at an early date a Bill dealing with the question of the preservation of ancient monuments and buildings; but pending its introduction he could make no statement with regard to its provisions, nor as to whether the Reindeer Inn at Banbury would fall within its scope.

Rejection of the Lambeth Bridge Bill.

The London County Council Lambeth Bridge Bill was thrown out, after discussion last Thursday, by 180 to 115 votes. Its rejection was moved by Mr. Essex in order to elicit further information about the proposed bridge. Mr. Crooks, who seconded, said the mistake ought not to be made of belittling London; everyone knew what a dismal failure Southwark Bridge was, yet this proposal was to build a bridge which would be four inches narrower. Mr. Burns urged that a bridge of greater width was needed in order to provide adequate facilities for traffic. He asked that if Parliament sanctioned the proposal to make the bridge only 48 feet wide, the Council would put in abutments wide enough to carry a bridge similar to Westminster or Vauxhall Bridges, which were 84 and 80 feet in width respectively. Lord A. Thynne said the only object of the bridge was to provide a relief bridge for Westminster and Vauxhall, but it was designed in width and every other respect to carry traffic, and would be wide enough to carry a tramway line should this be ultimately considered necessary.

Obituary.

M. Fernand de Dartein, whose death, in his seventy-fifth year, was announced at the last meeting, was elected a Corresponding Member of the Institute in 1892. He was a student of the Ecole Polytechnique, and passed from there into the service of the Ponts et Chaussées, of which later on he became "Inspecteur-général." His connection with the Institute, however, is due to other claims: he succeeded M. Léonce Reynaud as Professor of the History of Architecture in the Ecole Polytechnique, and it was he who persuaded his old comrade Choisy to come and assist him with his lectures as Professeur-adjoint. In the late sixties he commenced the study of Lombardic and Romanesque-Byzantine architecture in the North of Italy, and published in 1885 a magnificent work on the subject which is in our Library. In this work all the plates, which are of great beauty, were drawn and in many cases etched by him, and the history of the buildings illustrated, which are described in detail in the volume of text, shows him to have been a great archæologist. On the completion of that work he took up the study of bridges—first, those designed and carried out by the engineers of the Ponts et Chaussées from the commencement of the eighteenth century, which in many cases are remarkable designs; and secondly, those in other countries, including England. Of this work, three volumes have already been published, and the others are virtually completed. The fourth volume should contain examples of English bridges which he came over and measured some twenty years ago. I hope in the next issue of this Journal to be able to give an additional account of M. de Dartein's career.

R. Phené Spiers.

Duncan McNaughtan, of Glasgow, *Fellow*, died at his house in Bearsden on the 26th ult. Born at Rutherglen in 1845, Mr. McNaughtan served his articles with the late Mr. Spence, and spent altogether some six years in his office. He also assisted for a time in the office of Messrs. Campbell Douglas and J. J. Stevenson, Glasgow. Coming to England for a year he followed a definite course of architectural study, attending the art classes at Kensington, and visiting the principal cathedral towns, measuring and drawing from cathedrals and other important buildings. He started on his own account in Glasgow in 1871. His practice was a very varied one, embracing public and municipal buildings, churches, halls, schools, country mansions, and villas, extensive warehouses and shops. Among his principal buildings were the Maryhill Town Hall; the Baltic Chambers, Wellington Street, one of the most important commercial buildings erected in Glasgow during recent years; Lord Kelvin's Warehouse; County and Police Buildings, Dumbarton; and several schools for the Glasgow, Maryhill, New Kilpatrick, and Rutherglen School Boards. Mr. McNaughtan was an old member of the Glasgow Institute of Architects, and was elected a Fellow of the Royal Institute in 1906. His practice is being continued by his son, Mr. Alan G. MacNaughtan.

MINUTES. IX.

At a Special General Meeting held Monday 4th March 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 19 Fellows (including 5 members of the Council), and 30 Associates (including 1 member of the Council)—the President announced that the Meeting was convened in pursuance of By-law 70 to elect the Royal Gold Medallist for the current year, and the President having moved in accordance with notice that Mr. Basil Champneys be elected for the honour, it was unanimously

> Resolved, that subject to His Majesty's gracious sanction the Royal Gold Medal for the promotion of Architecture be awarded this year to Mr. Basil Champneys for his executed works as an architect.

The Special Meeting then terminated.

At the Ninth General Meeting (Business) of the Session 1911–12, held on Monday, 4th March 1912, at

the conclusion of the Special General Meeting above referred to, and similarly constituted, the Minutes of the Meeting held 19th February, having been printed in the JOURNAL, were taken as read and signed as correct.

Mr. Maurice B. Adams [*F.*] asked whether it was the policy of the Council to postpone further consideration on the part of the members of the Institute as to incorporating the Society of Architects till after the Committee appointed to take evidence on the question of Registration had made its report, and whether the appointment of this Committee to take evidence as to Registration implied that the Council considered the matter to be still an open question, seeing that the Institute as a body had already committed itself to the policy of promoting a Bill before Parliament for the Statutory Enrolment of Practising Architects.

The President replied that the Council did not consider that Registration was still an open question, but that the Institute and the Council were bound by the Resolutions of the 4th March 1907. Further, that the Council's proposals of the 8th January having been referred back to them for further consideration, they had appointed a strong Committee to consider the matter and report to them upon it.

The decease was announced of Fernand de Dartein, *Hon. Corresponding Member*, Paris, elected 1892; Duncan McNaughtan, of Glasgow, *Fellow*, elected 1906; George Edward Pritchett, elected *Fellow* 1860, resigned 1893.

The Secretary announced that Mr. R. Scott Cockrill, of the class of Associates, had by a resolution of the Council under By-law 22 ceased to be a member of the Royal Institute.

The following candidates were elected by show of hands under By-law 10 :—

AS ASSOCIATES* (43).

BARGMAN : Robert Frederick [*S.* 1906] (Dorking).
BAXTER : James Alex. Manson [*Special*] (Edinburgh).
BENNETT : Thorold [*S.* 1907].
BESANT : Hubert Saxton [*S.* 1908].
BRITTAN : Harold William [*S.* 1910].
CASTELOW : Charlie [*Special*] (Roundhay, Leeds).
CLARKE : John Moulding [*S.* 1909] (Preston).
COWDELL : Charles Joseph Morton [*S.* 1908] Leicester.
CROUCH : Frederick Alfred [*S.* 1910] (Brighton).
DOVASTON : John [*S.* 1905].
DOWDESWELL : Frank [*S.* 1908].
DURRANT : Arthur Michael [*S.* 1908] (Hemel Hempstead).
EDWARDS : Sidney James [*S.* 1910].
GROUND : John Kingston [*S.* 1907].
JOHNSTON : Bruce [*S.* 1909].
KNEWSTUBB : Joseph John [*Special*] (Penrith).
LARSEN : Arthur Wilhelm [*Special Colonial*] (New Zealand).
LENTON : Frederick James [*S.* 1909] (Stamford).
LING : Richard Bertram [*S.* 1905].
LOVELL : Richard Goulburn [*Special*] (Eastbourne).
LUCAS : William [*Qual.* June 1911, *S.* 1908].
MARTIN : Henry Ray [*S.* 1908].
MEIKLEHAM : David Lang [*S.* 1907].
MORLEY : Francis Henry [*S.* 1907] (Liverpool).
MOSS : Harold Edward [*S.* 1911].
NICHOLSON : Frederick William [*S.* 1909] (L'pool).
ORDISH : Roland [*S.* 1908] (Ilkeston).
OXLEY : Wilfred Benjamin [*Special*] (Leicester).
PHILLIPS : Arthur Todd [*S.* 1910].
ROBINSON : Harold Graham Fector [*S.* 1910] (China).
RUSSELL : Andrew Laurence Noel [*S.* 1911] (Jedburgh).
SCOTT : Bernard Wardlaw Habershon [*Qual.* June 1911, *S.* 1909].
SELWAY : Edward Ralph Douglas [*S.* 1909].
SINCLAIR : William Braxton [*S.* 1904].
STEWART : Henry Sinclair [*Special*].
SWASH : Frank Stanley [*Special*] (Llandrindod Wells).
WAUGH : Edward Henry [*Qual.* June 1911] (Johannesburg).
WELFORD : Arthur [*Special*].
WHITE : Charles Herbert [*S.* 1905] (Bristol).
WHITEHEAD : Thomas Gustavus [*S.* 1909].
WHYMPER : William [*S.* 1908].
WILLCOCKS : Conrad Birdwood [*S.* 1907] (Reading).
WYLD : Robert Stodart Balgarnie [*Special*].

* Except where otherwise mentioned all the candidates passed the qualifying examination in November 1911.

The Secretary announced that the Council, pursuant to By-law 78, had admitted the Northamptonshire Association of Architects to alliance with the Royal Institute.

Mr. Horace T. Bonner [*A.*], in accordance with notice, moved : "That it be an instruction to the Council that in any future or amended Charter, or By-Laws under such future or amended Charter, an equal number of Fellows and Associates be elected to such Council exclusive of the President, 4 Vice-Presidents, and Hon. Secretary or Secretaries; and that only one list of candidates eligible for election to such Council shall be printed and issued at one date prior to such election containing the names, addresses, and qualifications of all candidates duly nominated for such election."

Mr. K. Gammell [*A.*] seconded the motion.

Mr. Frank Lishman [*A.*] moved as an amendment that the number of Associates on the Council be increased by half as many again, bringing the number up to nine.

After further discussion on Mr. Bonner's motion, Mr. Herbert Shepherd [*A.*] proposing to second the amendment was ruled out of order.

Mr. Bonner pressing for a vote on his resolution, and the President having explained that as the proposal involved an alteration of a By-law Associates were not entitled to vote thereon, Mr. Bonner accepted the President's offer to bring the matter before the Council, who he promised would give it their careful consideration and report upon it to the General Body.

Mr. Sydney Perks, F.S.A. [*F.*], in accordance with notice, moved : "That every speech delivered at any Business Meeting shall be published in the JOURNAL at the earliest date after the Meeting, subject only to revision by the author, and that the Council be requested to take the necessary steps to carry out this resolution." To this he added the words "If the Editor is of opinion that any words are libellous they shall not be printed."

Mr. Wm. Woodward [*F.*] seconded the motion, substituting, with the mover's assent, the word "Chairman" for "Editor."

Mr. Edwin T. Hall [*F.*] moved as an amendment to omit the added sentence and to insert the words "Subject to such editing as the Chairman of the Meeting may think fit."

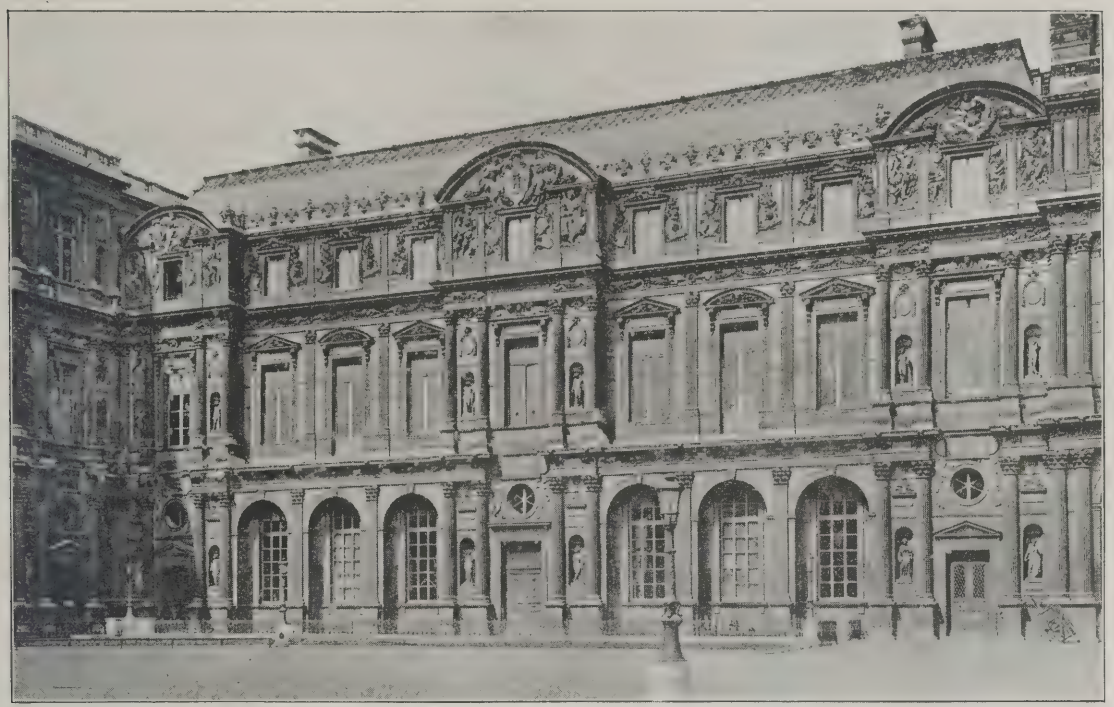
Mr. H. H. Statham [*F.*] seconded the amendment, which was put to the Meeting and carried.

The resolution as amended having been put as the substantive motion, it was thereupon

> RESOLVED, That every speech delivered at any Business Meeting shall be published in the JOURNAL at the earliest date after the Meeting, subject only to revision by the author and to such editing as the Chairman of the Meeting shall think desirable, and that the Council be requested to take the necessary steps to carry out this Resolution.

The proceedings then closed, and the Meeting separated at 9.45 p.m.

Architectural Library



WEST SIDE OF THE COURT OF THE LOUVRE, PARIS.

From *Architecture of the Renaissance in France*, by permission of Mr. Batsford.

THE ARCHITECTURE OF THE RENAISSANCE IN FRANCE.

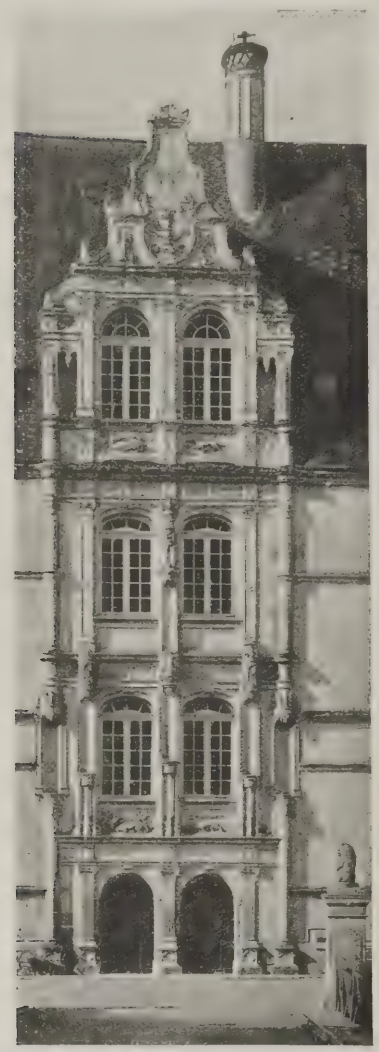
By W. H. WARD, M.A. Cantab. [*A.*].

Read before the Royal Institute of British Architects, Monday, 18th March 1912.

NO country outside of Italy made the teaching of the Renaissance in architecture so thoroughly her own as France. In Italy this attempt to express contemporary requirements in a language of forms and proportions inspired by the study of ancient monuments was a native growth, a reversion to national methods temporarily disturbed by foreign importations. The causes which led to so ready and complete an acceptance of it in France, which had a native architecture of an altogether different character, form too wide a subject to be discussed now, if time is to be left for a survey of its consequences. Among these causes are the obvious ones of geographical proximity, and kinship in race and civilisation, language and thought, between the two peoples, and these are in the main sufficient to account for the homogeneous character of the architectural evolution which began in France towards the end of the fifteenth century and continued at least down to the first quarter of the nineteenth. This evolution opens with a period of some fifty years, during which a fusion took place between the native style already in possession, which though full of vigour was restlessly seeking for a new inspiration, with the new ideas which Italy could supply. From the moment when the fusion was to some extent complete, that is the middle of the sixteenth century, we have merely to trace a series of phases, expressing successive changes in the social, intellectual, and political life of the French nation. But "plus ça change, plus c'est la même chose." These phases, produced under influences varying from generation to generation, are, on the whole, little more than surface modifications on a strong unchanging substratum, consisting

of the native tradition fused with the early acquired classical ideas. In each and all of them the national genius shines forth, and seldom if ever can there be any doubt as to the nationality of any example of French architecture, or of its inseparable companion decoration, during the period defined.

With these few words of introduction, and the proviso that for reasons of time I must adopt the self-denying ordinance of refraining from touching on church architecture and many other equally interesting aspects of so many-sided a subject, such, for instance, as its influence abroad, I will plunge direct into a brief outline of the story.



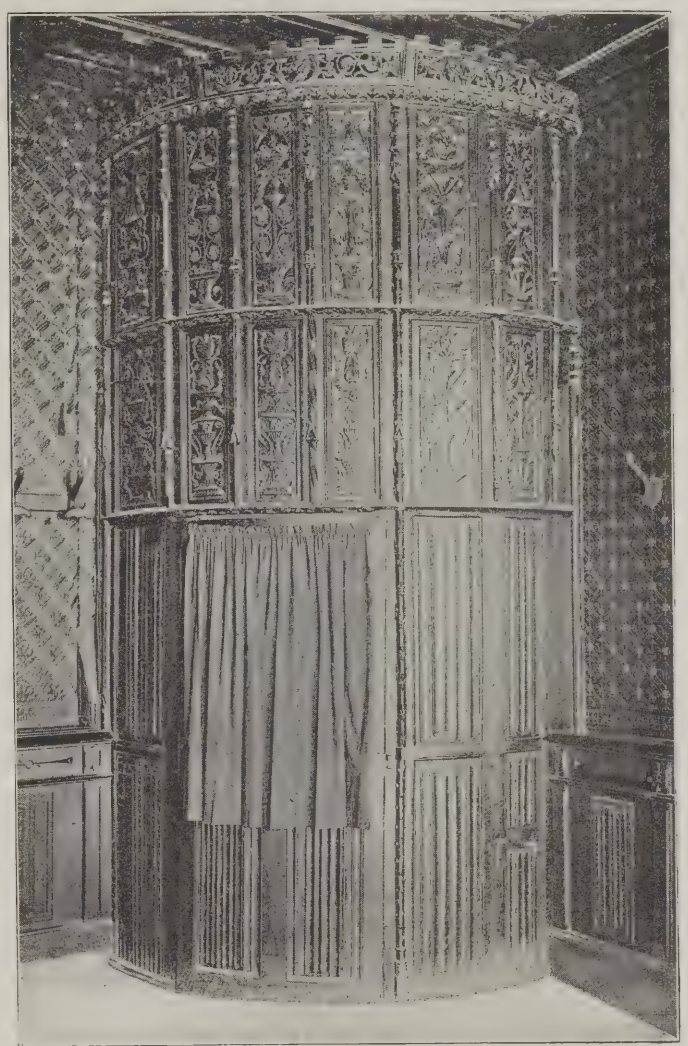
AZAY-LE-RIDEAU: ENTRANCE BAY.*

In the fifteenth century, France rose from the anarchy and disorganisation of the Hundred Years' War to a new era of prosperity and consciousness of national life under the rule of a strong monarchy. This state of affairs found expression in the last or Flamboyant phase of her Gothic architecture, characterised by extravagant but graceful exuberances, immense technical dexterity, and excessive naturalism in sculpture. The bulk of the buildings of the time showed an intricacy of decoration and restlessness of line hitherto unreached. But signs were not lacking here and there of a striving after those ideals which everywhere accompanied the Renaissance—the change from the striving and aspiring, the vertical and the mysterious in architecture, to repose, horizontality, and clarity. To take but two examples as symptoms: the elaborate tracery of the screens at Albi shows a return to the semi-circular arch, and the courtyard of the house of Jacques Cœur at Bourges displays a tendency to horizontal treatment and regularity of setting-out, though both works are wholly Gothic in detail. The way was thus being imperceptibly prepared for the great change to come. Definitely classical detail first made its appearance in certain monuments carried out by Italians about 1480 under the auspices of the House of Anjou, which was closely connected with Italy—a chapel in the old Cathedral of Marseilles, tombs at Le Mans and Tarascon, a reredos at Avignon. They do not seem, however, to have made any impression on the French building profession, and during the following fifteen years the movement was at a standstill, till the enthusiasm for Italian art aroused in the minds of the French King and his Court during Charles VIII.'s campaign of 1495 set it going once more. Italian craftsmen of various descriptions, stone and wood carvers, painters and maiolica-workers, cabinet-makers, bronze-founders, and garden designers, were engaged to work in France. The chief colony of these was that employed by the King himself to beautify his castle of Amboise. Close intercourse with Italy was kept up for the next thirty years by the foreign policy of the succeeding reigns and the almost incessant wars in different parts of Italy which it involved. During this period troops of Italian craftsmen spread throughout France, the valley of the Loire, Normandy, the Ile de France and the neighbourhood of Toulouse being the chief

* This and the illustrations on pp. 361, 367, and 376 are from blocks illustrating Mr. Ward's *Architecture of the Renaissance in France*, kindly lent by Mr. Batsford.—ED.

centres of activity. The result of their presence manifested itself at first principally in the appearance of ornament and detail, occasionally of entire features in the Italian manner, in buildings otherwise of a Gothic character, such as the wing added to the Castle of Châteaudun in the first years of the sixteenth century. The same mingling of motives is seen in individual features, such as a chimney-piece in the same building.

By the time Francis I. came to the throne on January 1, 1515, Renaissance forms had become acclimatised. Though Italians were still frequently employed, the French builders had acquired some skill in the new style. The result was that a number of buildings began to arise which have been characterised as French construction in Milanese dress. The well-known example of Francis I.'s work, the Château de Chambord, is a case in point. The castle plan, the moat, the round towers, the spiral stair turrets, the steep roofs, the "chemin de ronde," the picturesque and irregular sky-line are all essentially French; but the pilaster treatment of the elevations, the decoration of the dormers and chimney-stacks, and the detail and ornament throughout are drawn from the *répertoire* of the North Italian Renaissance, so like in its exuberance to the native Flamboyant Gothic; while the soberer work of Brunelleschi and the early Florentines, and of Bramante in his Roman manner, found little echo at this period in France. The qualities which charm in this style, the style of Francis I. as it is called, which prevailed roughly from 1515 to 1540 or 1545, are its picturesque and somewhat haphazard grouping, its ingenious use of Italian motives to clothe native building forms in a delicate embroidery of ornament, as in the entrance bay at Azay-le-Rideau, or in the great staircase at Blois. The latter reproduces a mediæval type of which the classical example was the staircase of the Louvre built by Raymond du Temple in 1365, while the adjoining cornice is a reminiscence of mediæval machicolations. The style is lovable, too, in the interior, where its rather minute scale is more appropriate, and where the fineness and variety of its exquisite arabesques can be more fully appreciated. An example



LE GRAND ANDELY: "TAMBOUR" OR DOOR-SCREEN, HÔTEL DU GRAND CERF (16TH CENTURY).

is shown in the "tambour" or door-screen from the well-known hostelry of the Grand Cerf at Le Grand Andely (p. 359).

The early Renaissance, however, was not always smiling, and we see it in a more serious mood in the castle of St. Germain, largely rebuilt by Francis I. about 1540. Yet we must not expect from it the highest achievements of which architecture is capable. The art of composition was in its infancy. Carefully balanced schemes, a sure sense of proportion, and a feeling for the monumental are rarely to be met with at this stage. But some time before the end of Francis I.'s reign, from, say, about 1530, a new type of design began to come into competition with that which bears his name.

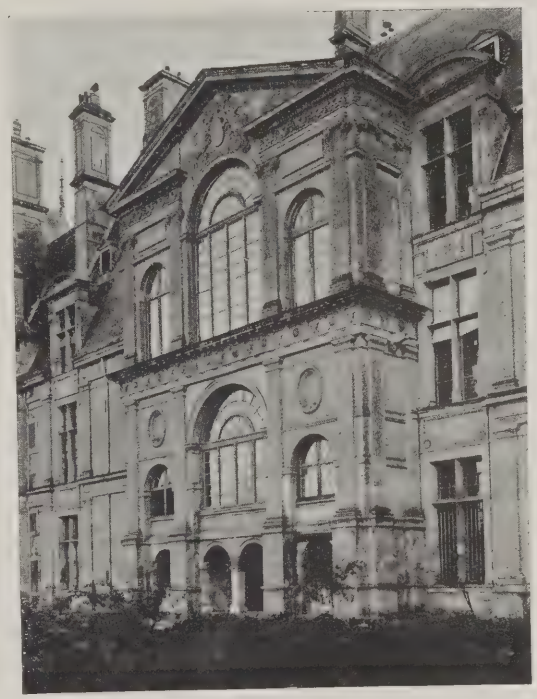
The middle years of the sixteenth century in France were a period of intense intellectual and artistic life, when amongst other activities Italian literature and art as well as classical studies were cultivated with enthusiasm, and, in every department of life, refinement was pushed to its furthest limits. The court and upper classes generally were both prodigal and discriminating in their patronage of all branches of art, and in particular in the building of splendid residences.

Up to this point the architect in the modern sense had scarcely emerged. He had hardly disentangled himself from the master mason, the master carpenter, and the clerk of works. While, among the earliest batch of Italians, only Fra Giocondo and Boccador can be said to have exercised anything approaching the functions of an architect, even in their case it is quite uncertain whether they were entrusted with administrative control over the works attributed to them. From this time onwards a new generation of men arose whose training was theoretical as well as practical, men like Philibert de l'Orme, Jacques Androuet du Cerceau, and Jean Bullant—men who read and travelled, and in some cases visited Italy and sketched and measured buildings there. This brought about one side of the change. The other was due to the new sources of inspiration; for both the young French architects and the Italians whom Francis continued to attract to France were now imbued with the ideas of the mature or Roman phase of the Renaissance.

The effect was soon seen in schemes considered as a whole from the start, in a broader manner, a greater regularity and symmetry, in a more systematic use of the orders and a more scholarly treatment of detail, as well as in the shedding of much mediæval practice, particularly such as related to fortification. At the same time much that was both national and picturesque was retained. Round towers and spiral stairs, oriels and turrets, steep gables, and flying buttresses, crockets and finials and open crestings and the delicate arabesque decoration of surfaces fell into disuse. On the other hand the large mullioned windows and tall dormers and high pitched roofs—one pitch to each block—remained, and the vertical character of design was thus maintained in elevations, as well as by the frequent rectangular pavilions which replaced circular towers.

There had thus been evolved an architecture, which, if it still bears upon it both the faults and the charm of youth, may yet be regarded as having reached the first stage of maturity. Into the careers and works of its great exponents it is impossible to go in detail, but the character of the buildings of the period may be illustrated by a few examples showing it in various aspects. The court front of the Louvre (p. 357), which was built under the architect Pierre Lescot with the collaboration of the sculptor Jean Goujon between 1546 and 1566, and is perhaps the richest monument of the age of Henry II., as befitted the metropolitan palace of the monarch, retains some of the playfulness of the previous period, as, for instance, in its exquisite stone cresting; but in its breadth and lucidity of setting-out and in its use of the orders it far exceeds anything yet done. My next example is the great staircase bay added probably about 1560 to the earlier Château of Ecouen by Jean Bullant, a man with a bolder sense of monumental scale and greater imagination than any of his contemporaries, though occasionally

unfortunate in his experiments. The architect of the Château of Monceaux, now destroyed, is not certainly known, though there is much to suggest that it was designed by Primaticcio. The latter had been engaged by Francis I. for the decoration of Fontainebleau and became the "protégé" of the king's daughter-in-law, Catharine de' Medici, for whom Monceaux was begun in 1547, the first year of her husband's reign. Though the history of the building is obscure, there is reason to believe that this mansion was merely restored, not rebuilt as used to be stated, by Henry IV. in 1593, though the screen galleries and the outlying pavilions or lodges, and possibly other features, belong to this later period. If this view be correct, Monceaux shows not only one of the earliest examples of the use of a giant order in any country, but a broad monumental feeling, which is more often associated with the work of the seventeenth than of the sixteenth century. The Hôtel Lamoignon in Paris, built probably about 1570 for Diane de France, is an example of a similar type of design applied to a large town mansion, while a house at Bar-le-Duc of about the same date by an unknown architect illustrates another treatment with several orders applied to a terrace house.



CHÂTEAU OF ECOUEN: STAIRCASE BAY ON NORTH FRONT.

France, then, within the middle years of the sixteenth century had arrived at a style based on the classic code of forms and composition, which suited her then requirements, and which eventually proved susceptible, by a process of relatively small successive modifications and adjustments, simplifications or elaborations, of adaptation to the changing conditions of social life up to the Great Revolution. It was perhaps the more fitted permanently to satisfy a variety of French requirements in that the foreign element in its composition was itself of a two-fold nature. The mature Renaissance was introduced from Italy at a time when it was already beginning to bifurcate into the twin stream of Michael-Angelesque Baroque and puristic Palladianism. France owed to this period the germs not merely of the Pure Classic of the old Louvre, Perrault's Colonnade, the palaces in the Place de la Concorde and the Madeleine, but also of the Free Classic to be found in the works of the decorators of Fontainebleau, that love for the florid and exuberant or at least for the informal and for free-flowing curves which had already blossomed into Flamboyant Gothic, and was to reappear in the cartouche work of the Louis XIII. and the rocailles and scrolls of the Louis XV. periods, and once more in our own day in a bastard form in the so-called "Art Nouveau." To a great extent the phases of French architecture which are known under the names of Henry IV., the last four Louis, and the Empire are differentiated from their predecessors not so much by the introduction of new elements as by a recombination of elements already present at an earlier stage. Some that had been prominent just before would be dropped, others which had remained in the background would be brought into prominence; the most distinctive features of any given phase are hardly ever the invention of that age, but are traceable much further back, and owe their new importance to the spirit in which they are re-interpreted and the character of the other elements with which they are re-grouped.

A type of plan for the great house in town or country had by the time of Henry II. been evolved from that of the mediæval castle and became fixed for succeeding centuries. This is true, however, only of the general outline and massing, for changes in the habits of social life were to call for many modifications in the internal arrangements from time to time. In essence this plan consists of buildings surrounding an enclosed rectangular courtyard, with the main block at the back, a screen in front containing the entrance, while the sides were either extensions of the main block or lower galleries. At each angle of the court was a rectangular pavilion somewhat higher than the adjoining buildings, with occasionally a pavilion larger than the rest in the centre of the main block. Subsidiary courts were also added on various sides, such as garden courts, forecourts, kitchen, and stable-courts. The tendency was for the main block to grow in importance at the expense of the remainder, becoming deeper and receiving pavilions at each angle. The court came to be enclosed by nothing more than balustraded terraces, railings, or even merely lines of trees, while the moat, wet or dry, which enclosed the main court, persisted at least in occasional use down to the Revolution, as also did the wholly or partly detached pavilions at the angles and entrance of the court. The Château of Tanlay is fairly typical, though, having grown out of a mediæval castle, it still preserves its circular towers. The court façades and outer gatehouse are of the mid-sixteenth century and were built for Admiral Coligny, who was killed in the St. Bartholomew massacre. The inner gatehouse, the screen, now destroyed, and the garden front belong to the seventeenth century and were the work of the architect Pierre Le Muet.

If, besides the plan, we examine many of the features specially associated with a particular style we shall find that they were already present at least in embryo in the sixteenth century. The characteristic high-pitched roof derived from the middle ages never at any time up to the present day went out of use, even in the most classicising periods. It is a striking fact, for instance, that at Versailles itself the chapel which so sadly mars the symmetry of the palace is the only executed part of a scheme to re-roof the whole vast building with high roofs. Again, two forms of steep roof so characteristic of French practice in the seventeenth and eighteenth centuries, the so-called Mansard roof with its broken slope, which every schoolboy knows—and knows wrongly—to have been invented by François Mansart, had already been employed by Lescot at the Louvre, and the curved hipped roof or square dome familiar at the Pavillon de Sully, the Palais de Justice and elsewhere, occurs frequently in the drawings of Jacques Androuet du Cerceau. Further, the flat balustraded roof so often censured as a fad of the age of Louis XIV. occurs as early as in Francis I.'s building at St. Germain.

Again, the brick architecture with rusticated stone coigns and bands typical of the reign of Henry IV. is foreshadowed in some of the designs for Charleval illustrated by du Cerceau and in the outer pavilions at Anet by Philibert de l'Orme, and persists as late as the Château of Ménars built by Madame de Pompadour about 1760; while the accompanying feature of windows grouped in vertical lines by coigns or pilasters is traceable not only to the style of Francis I.—we have seen an instance of it at Blois—but to late Gothic buildings, as, for instance, the episcopal palace at Evreux. Much the same may be said of decoration as of architecture. All later styles of decoration in France derive much, if not all, from the stock of ideas already possessed by France in the middle ages or acquired by the time of Henry II. Not to multiply instances unduly, I may mention one detail of ornamentation usually associated with the Louis Seize style—the oval medallion over which a garland with pendent ends is draped—as occurring as far back not merely as 1665 on Perrault's Louvre, but as 1565 on Lescot's Louvre.

The decorative designs of du Cerceau are again a striking example of the wide range of the acquirements of the age of Henry II. Du Cerceau may perhaps never have carried out a

building, he may have shown uncertainty in his scales and other faults, but that he had a wonderful sense of the resources of classical art and immense fertility of design is unquestionable. A study of his series of Great and Little Arabesques, or Grotesques as they were then called, published in 1550 and 1565, will reveal that they contain down to small details most of the elements of subsequent adaptations of this favourite type of decoration. Whether he got the ideas when in Rome from the Baths of Titus, or from the Vatican decorations which imitated them, or merely from the works of the Italian decorators at Fontainebleau and other royal castles, I do not know, nor whether subsequent decorators were directly inspired by his drawings, but the fact remains that little touches characteristic of Vouët or Bérain in the seventeenth century, of Watteau or Cauvet in the eighteenth, and of Percier and Fontaine in the nineteenth are all to be found there.

Renaissance architecture in France may thus be said to have reached in the mid-sixteenth century a stage of at least incipient maturity, not only as regards the character of its buildings *per se*, but because it already contained, either in germ or fully developed, nearly all the elements which went to the making of subsequent styles.

But in each country of Europe it seems that some untoward circumstance was destined to arrest the flow of Renaissance development, or at least to check it for a time, with the result that when it was released once more, the environment had sometimes become less propitious. To Italy the French and Spanish invasions brought devastation and the loss of political liberty; on Spain and the Low Countries the despotism of Philip II. descended like a stifling pall; in England the Reformation cut off intercourse with the fountain head in Papal Italy; in France the life of the nation was absorbed for a generation in the civil wars which raged intermittently from the death of Henry II. in 1559 to the final recognition of Henry IV. in 1596. The two centuries which followed, from the re-organisation of France as a centralised State to the Great Revolution, coincided with the rule of the Bourbon dynasty, and witnessed the growth, culmination, decline, and collapse of Absolute Monarchy. The architecture of this period is essentially one, though it passes through various changes of taste, affecting principally the decorative system. It represents the full maturity of Renaissance architecture in France in various moods; and these moods reflect the changing conditions of society and politics, thought, and literature. They may be roughly grouped under the names of the four Louis, whose joint reigns cover all but the first fifteen years of the period. Though the style of Henry IV. is a recognised designation, it is practically indistinguishable from that of Louis XIII. It is only a little less formed.

When Henry IV. succeeded in establishing himself firmly on the throne, the Wars of Religion had left a trail of disorganisation and demoralisation in every department of life. Not only had the period of anarchy been unpropitious to building, but it had coarsened the whole tone of society. The new court was on a lower plane of culture and of taste than that of the courts of Francis I. and Henry II. There was love for art and architecture, but it was without fine discrimination. Gluttonous carouses and rude debauchery, broad farce and lurid melodrama were the things that tickled the palate of that generation, and in architecture and decoration they demanded effects showy to tawdriness and vigorous to brutality. The Queen, Maria de' Medici, though brought up in Florence like her kinswoman Catharine, was without her refinement. Her chief tastes lay in big bold architecture and gaudy jewellery. Henry on the other hand, though his tastes accorded in some respects with his age, showed, too, that he was a survival from the Valois court of his youth, and could prove himself a genuine connoisseur. To him was largely due the policy consistently followed in subsequent reigns of protecting artists and craftsmen by giving them free lodging in the Louvre and in other ways; and his encouragement of architecture was generous and extensive.

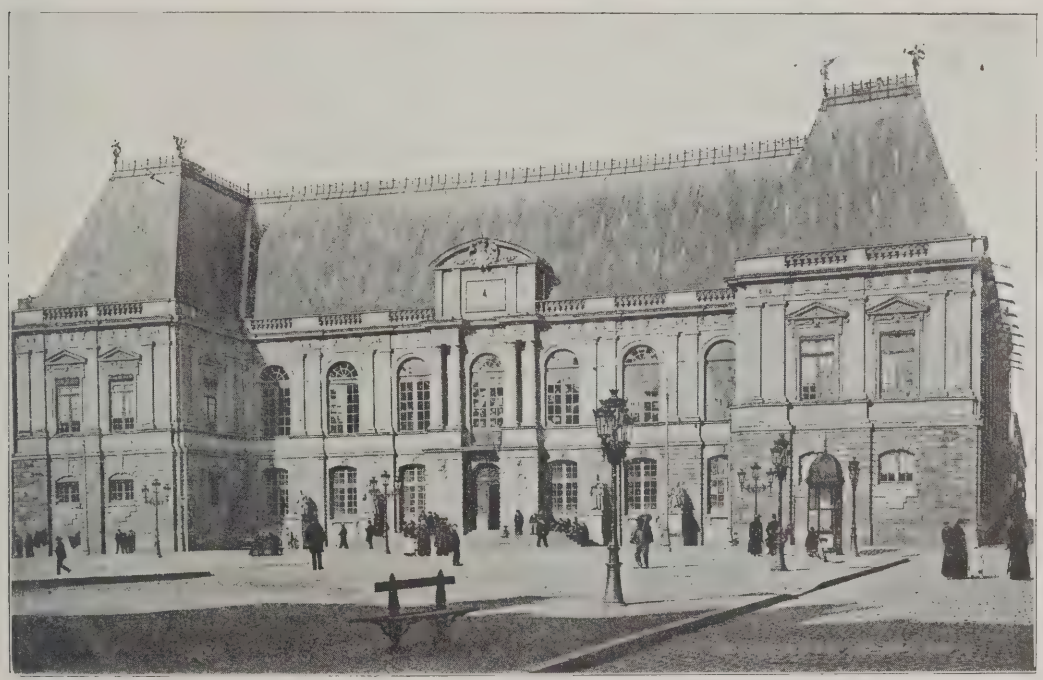
Other influences also helped to mould the architecture of the period. The Huguenots

were now in a position of authority, and their tradition of austerity of life is traceable in the quaker-like sobriety of the ordinary buildings of the early seventeenth century, of which the Château de Rougemont is an average example. This is also partly a reflection of the economical methods which were the keynote of the administration of Henry's minister Sully; and to the same cause, as well possibly as to the intercourse with Holland, Henry's ally, is due the prevalence of brick. This was used generally in combination with stone coigns and bands, the coign treatment being repeated in lieu of pilasters at intervals in the wall masses, and used to connect up the openings in vertical lines. Parallel with this treatment was the extensive use of rustication or "bossages" in buildings entirely of stone, as in the Château of St. Loup-sur-Thouet, while in both brick and stone it was usual to ornament the centre of each wall panel with a stone tablet, a medallion, or a niche. In much of this type of architecture we may see traces of that rationalism which crops up from time to time as a guiding theory in French design: the view that architecture is merely building and that construction should be its own decoration. Hence such a purely ideal means of expression as the orders was largely neglected. When they are used, as in the otherwise charming Place Royale, now Place des Vosges, built by Henry IV. in Paris, it is done with little distinction, while mouldings and features are of a heavy type and the building forms generally err on the side of massiveness. In this the lack of refinement in the taste of the age is reflected, as also in the forms employed by the decorator, both externally as in the Château of Beaumesnil, an example of the more florid type of building of the period, and internally.

The Italian artists, finding no livelihood to be gained during the Civil Wars, had returned home, and, when decoration was again required, recourse was often had to Flemings, who interpreted Italian barocco motives in the spirit of the rather heavy and luxuriant naturalism which has often characterised Flemish art. Among these was Ambroise Dubois, who decorated the Galerie de Diane and the Chambre Ovale at Fontainebleau in the first years of the century, and later Rubens, who carried out the decoration of a long gallery at the Luxembourg for Maria de'Medici between 1622 and 1626. His name in this connection is a proof that a certain coarseness of taste does not exclude genius, and, much as the grossness of the ornamental *répertoire* of this period may be deplored, it is impossible to deny its decorative quality. A chimney-piece at the Château of Lasson is fairly typical of the Louis XIII. manner. Its scale is always bold, and, in spite of its intricacies, there is nothing mean or niggling about it. Its typical expression is in the *cartouche*, which it extends to every decorated portion of a room or building almost to the exclusion of floral or foliage motives. The material which gave rise to these forms is probably boiled and modelled leather, which was actually used in the late sixteenth century, as may for instance be seen in a note appended by du Cerceau to a drawing of a chimney-piece in the British Museum. It is bossed into various swellings and sinkings, slashed and interpenetrated, and cut and coiled into scrolls at the edges. The analogous decoration in Germany acquired the name of "Auricular Style," owing to its fondness for the forms resembling ears of men and animals. This went to far greater length than anything in France, and illustrates a point that may be observed over and over again in comparing French work with that of other nations. The French have an inherent sense of balance and moderation, which, when they are using a method that may easily decline into abuse, makes them stop short before they have gone too far. The culmination of the Louis XIII. manner may be placed about 1630, and its influence is traceable here and there in the provinces almost to the end of the century.

But long before the death of Louis XIII., in 1643, a different spirit had begun to come over architecture. Architectural studies having been neglected during the later years of the Civil Wars, the architectural profession was rather at a low ebb and suffered from a dearth of capable men. With the seventeenth century, however, classical studies revived.

Works on the orders and the theory of design again began to appear. Men who had taken refuge in Italy returned, and younger ones resumed the practice of going there. The reign of Henry IV. produced some notable works rising above the general run of coign and panel architecture. The junction of the Louvre and Tuileries elicited dignified architectural efforts, whose authorship, however, is still shrouded in some obscurity. But the first quarter of the seventeenth century produced one architect of great talent in Salomon de Brosse. As a grandson of Jacques Androuet du Cerceau and nephew of the latter's two sons, who were all architects in the royal employ, he inherited a high tradition of design and was well fitted by his training, as well as by his position as First Architect to the Crown, to sum up in monumental works all that was best in current methods and add to them a touch of classical dignity. His Palais du Parlement at Rennes, begun in 1618, was the most considerable public building erected in France since the Middle Ages and notable for its restraint, its austere and masculine dignity,



PALAIS DE JUSTICE, RENNES.

qualities which may also be predicated of his Luxembourg Palace in Paris, begun in 1615 for Maria de' Medici. Its garden front was rebuilt under Louis Philippe, when the palace was enlarged to accommodate the Senate. It is curious that some French writers should have been misled by the obvious but superficial resemblances of the banded orders and alternate rustication to the treatment of the garden fronts of the Pitti Palace into pronouncing the Luxembourg an essentially Italian design, without stopping to consider how incongruous such a building, with its court surrounded by buildings of varying height, with its boldly projecting pavilions and its high-pitched roofs, would look in Italian surroundings. The charming entrance pavilion or gatehouse is also foreign to Italian practice. It is in fact not only as French as any other Renaissance building in France, but in fact merely a variant on a theme already frequently exploited for nearly a century—as, for instance, at Ecouen, at Monceaux, and at Verneuil, while its system of rustication is not far removed from that of De l'Orme's so-called French Order at the Tuileries, and is almost identical with that used within the previous ten years at

Fontainebleau (cf. fig. p. 366). De Brosse, however, remained a little heavy, a little uninspired, a little uncertain, even when at his best. But the classicising tendency, the first symptoms of which reappeared in his work, was maintained throughout the succeeding period from 1624 to 1661, which coincides with the reigns, as they may justly be described, of the two Cardinal Ministers, Richelieu and Mazarin. Both were keenly interested in the arts, and especially in the public works as a means at once of expressing and of contributing to the prestige of that absolute government which it was their policy to build up. Both kept in close touch with the art of Rome, ancient and contemporary, sent artists to study there, and commissioners to collect antiquities or procure works of art and the services of Italian artists. At the same time, under settled government, society had time to acquire polish. Under the spread of education and the civilising influences of such circles as that which gathered in the Salon of Madame de Rambouillet, social life lost much of its grossness. The importance assigned to letters and art is proved by the foundation of the Academies. French literature was illustrated in the early years of Louis XIV. and the last of Mazarin by more men of genius than at any other period in its history. It was inspired by that ideal of perfection of form which shines out in the *Maxims* of La Rochefoucauld and the *Provincial Letters* of Pascal, in Molière's *Misanthrope*, and Racine's *Phèdre*.

FONTAINEBLEAU: GATEWAY OF THE COUR HENRI IV.

In architecture a parallel transformation was simultaneously being operated, and it may be traced step by step in the work of the greatest architect of the seventeenth century, François Mansart, possibly a pupil of De Brosse, who used his master's example as a stepping stone to higher things. In his early Château of Balleroy begun in 1626 we find him using, but using finely, the "chaîne" and coign system of the day. But in the work carried out by him at Blois between 1635 and 1640 for Gaston of Orleans, though it is obviously reminiscent, in plan and general grouping, of the Luxembourg, he strikes a new note of stateliness, and shows a new sense of scale. By reducing the importance of rustication he heightens its effect and gains in repose without loss of virility. But there is still a trace of the heaviness typical of the Louis XIII. manner. This may be seen for instance in the extraordinarily effective decoration of the staircase. The advance in Mansart's work over that of his less refined contemporaries may also be gauged by comparing the Hôtel de Sully

in Paris by one of the du Cerceau family, built about 1630, with the main block of the Hôtel d'Aumont built by Mansart a few years later. All heaviness has entirely disappeared from his work in the noble mansion of Maisons begun in 1642. Here the detail is of exquisite but not excessive refinement, and the appeal, if less overwhelming, is more intimate, and made by a subtler and more intricate treatment of planes and masses. Having reached this degree of consummate accomplishment, Mansart maintained it till the end of his career, as may be judged from his fine remodelling of an earlier work in the Hôtel Carnavalet carried out in 1662, four years before his death.

That among architects Mansart was not an isolated case is proved by an examination of the great buildings of the last years of Mazarin's life. The charming Hôtel de Beauvais, in Paris, built in 1656, is a standing illustration of that same ideal of perfection of form which pervaded the thought of that age. The plans show the artistic treatment which Antoine Le Pautre contrived to give to a site of most unpromising irregularity, and, though the façade has been defaced, the charming circular portico through which the court is approached remains to witness to the exquisite talent of an architect who seems to have enjoyed too few opportunities of exercising it.

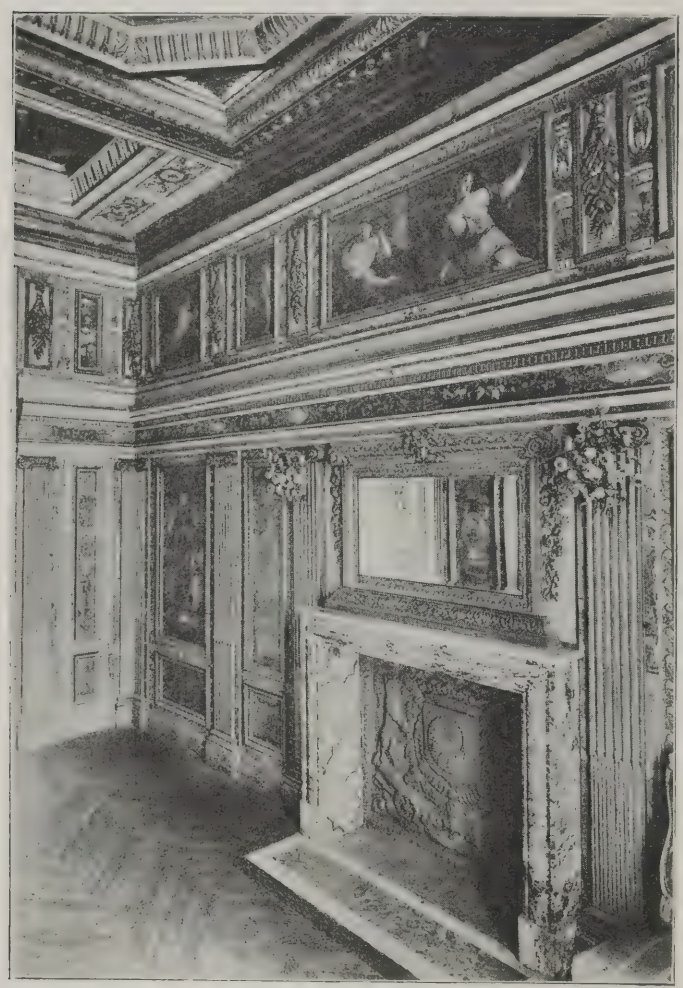
CHÂTEAU OF VAUX-LE-VICOMTE, BY L. LE VAU (c. 1656-60): GARDEN FRONT.

The contemporary Château of Vaux-le-Vicomte is of great interest from several points of view. Nicolas Fouquet, the minister who hoped to succeed Mazarin, having feathered his nest at the public cost, in a manner, it is only just to say, common to nearly all his colleagues, determined to have the most sumptuous mansion of the age. With consummate *flair* he secured for this purpose the men who were destined to exercise great influence on design during the heroic period of the "Grand Règne" just about to begin. His architect was Louis Le Vau, who was to continue the Louvre, complete the Tuileries, and begin the transformation of Versailles. His decorator was Charles Le Brun, who was to be sole arbiter over the decorative arts for a generation. His estate was laid out by André Le Nôtre, whose word was to be law in garden design throughout Europe for nearly a century. Vaux-le-Vicomte is remarkable at the present day in its retention, to a large extent undamaged, of the combined works of these three men and their subordinates. The château was the scene of the oft-described festivities of legendary splendour at which Fouquet entertained Louis XIV. soon after his assumption of personal rule, with the entire Court. Here the young and haughty king was scandalised at the possession of so much wealth gathered at the country's expense in the hands of a subject, and at the audacious motto "Quo non ascendam" accompanying the squirrel of Fouquet's arms which met his eye wherever it rested, and was confirmed in his resolve to bring about the fall of his unconscious host.

Le Vau's work, while never reaching the supreme accomplishment of François Mansart, and less certain in a sense of scale, is always dignified and often touched with some

degree of imagination. By a return to the giant order, almost abandoned for half a century and now sometimes used in combination with smaller orders, he illustrates at once the renewed influence of the Italians and the growing trend of the age towards the grandiose. These points are well illustrated in his design of the Collège des Quatre Nations, now Palais de l'Institut.

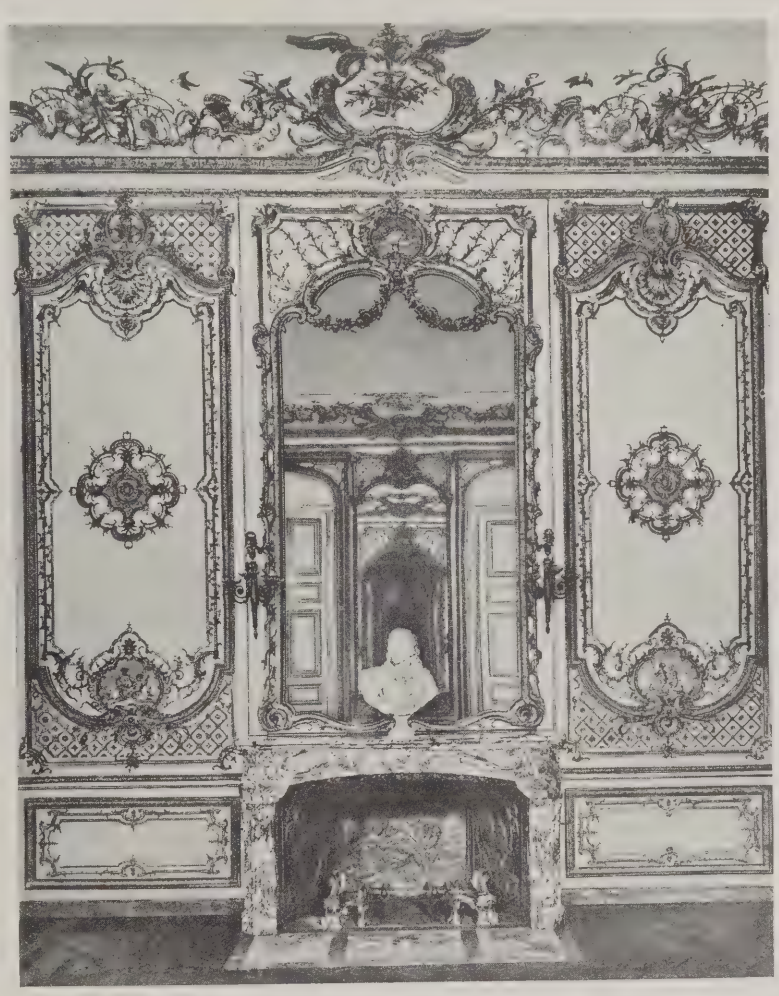
A parallel refining movement had been taking place throughout the century in the domain of decoration. Side by side with the works of the typical Louis XIII. school a thin stream of schemes conceived in purer taste had been flowing. Sully's rooms at the Paris Arsenal, decorated early in the century without the use of leather-work motives, witness to this. The use of purer ornament based on Roman decoration of the early sixteenth century, but with bolder, fuller forms, more closely set, in harmony with the architecture of the age, was revived by Simon Vouët, who returned in 1627 after many years' sojourn in Italy, and reigned supreme over the decorations of the royal palaces till his death in 1649. Foliage of the recognised classical types, especially in serried swags and imbricated bands, eagles, lions and mythical animals, the human figure in normal proportions, trophies, shields and panels of regular geometrical form, replaced the grotesque and sprawling cartouche work of the previous phase, but its bold heroic scale prevailed, and internal as well as external features remain broad and massive. Throughout the middle years of the century the engravers Jean Le Pautre, brother of Antoine, and Jean Marot poured forth designs for interiors of a similar character, and this manner received its fullest expression in the state rooms at Versailles decorated by Le Brun, such for instance as the Salon de Diane.



THE ARSENAL LIBRARY, PARIS: SULLY'S CABINET.

It is significant that the most interesting monuments of the central period of the seventeenth century should be the mansions and country seats of great subjects, rather than Royal palaces, for Mazarin's rule and Louis XIV.'s youth witnessed the last efforts of the French nation to assert itself against the growing absolutism of the Crown. For the last time the great houses of France were a power to be reckoned with. They could claim to be leaders in arms, in manners, in literature, in everything but political sagacity. But the ideals they fought for were tinsel, and nothing but chaos could have ensued from their success; crushed they must

be if order was to prevail, and crushed they were with an iron hand. Scarcely had the young Louis received from Mazarin's dying grasp a kingdom in which no power was left standing beside the throne, when he cast away the frivolous habits of his youth, and took the reins vigorously into his own hands. He soon showed that he would brook no insubordination, and Fouquet was snatched from the delights of Vaux to languish in a damp cell in an Alpine fortress. In the thirty years which followed, the "Grand Monarque" was at the zenith of his career. The goal of absolute centralised monarchy which successive generations of statesmen had been aiming at was reached, and not only the Court, but all France, nay all Europe, basked in the rays of the "Roi Soleil." The change accomplished may be read in the architecture of the times. Up to the 'sixties the chief glories of seventeenth-century architecture are the sumptuous mansions in town and country in which the nobles embodied their uncurbed ambition as well as their cultured tastes and splendid patronage of art. The next thirty gave birth to Versailles and the Invalides, to splendid palaces and pompous monuments built at the public expense, and destined quite as much to make visible to all in an impressive manner the might and prestige of the royal power, as to minister to royal luxury or vanity. The change, too, is symbolised in the very character of the architecture as well as the purposes to which it was applied. Before, we have multiplicity; after, unity. Before, great buildings are broken up into pavilions and galleries, with roofs of varying height and important dormers, while small orders prevail: after, we have single unbroken masses, continuous or concealed and balustraded roofs, and colossal orders.



VERSAILLES: CABINET DE LA PENDULE.
From Gaston Brière's *Château de Versailles.*

By Fouquet's fall the group of artists he had gathered round him was set free to serve Louis. Only one was not available, the great Vatel, whose art was of the gastronomic order and who shot himself during the fêtes of Vaux on hearing the unfounded news that the fish would not be forthcoming for dinner. Le Vau and Le Nôtre and Le Brun were set to work to

transform the royal châteaux into palaces worthy of the Great King. What Le Nôtre did for garden design was in accordance with the whole trend of the age. He unified and centralised. For a number of separate pleasaunces, orchards, kitchen gardens and tanks he substituted a single park including them all, with the house as the centre of a single arterial system of avenues and canals. The genius of Le Brun, though he was no mean artist, manifested itself likewise chiefly in organisation, in the success with which he gathered together an immense *personnel* of artists and craftsmen of every description, native and foreign, and turned their various aptitudes to account, making each contribute a share to magnificent schemes in the manner of Vouët, or Marot, or Le Pautre, but with an even more magniloquent spirit, exactly suited to the expression of the pomp and glamour of the Grand Siècle. Of Fouquet's trio only Le Vau, though a very capable architect, failed to be quite equal to the spirit of the time. His design for the east front of the Louvre conceived on traditional lines was shelved in favour of Bernini's, and eventually Perrault's, and his chief activity was transferred to Versailles and the Tuileries. At Versailles, partly because he was hampered by the King's condition that the old brick hunting-lodge should be retained intact, and partly, no doubt, because of his fidelity to old methods, he produced a design less than adequate to the new demands on architecture.

The advent of Bernini among the French architects in 1665 to design the east front of the Louvre was the touch needed from outside to precipitate the transformation towards which all things had been moving. All the known early designs for the completion of the palace were of the customary type, and treated the entrance front more or less as a screen broken up by several pavilions. They are extremely successful essays in the traditional manner produced by amplification or reduplication of the design of a nobleman's hôtel or château. Bernini's design, whatever its defects—and it is certainly a fortunate escape for Paris that it was not carried out—had the merit of striking a single unmistakable note; with its bold almost unbroken cubic mass, its gigantic order and cornice, it proclaimed itself unmistakably the palace of a sovereign of irresistible power.

Whether this change in the aims of architecture was in all respects a gain is open to question. Much that appeals to perhaps the majority of lovers of the art was certainly lost; on the other hand, a feeling of monumentality and classical spaciousness unattainable in the multiple type of design was brought within the range of possibility. Bernini had expressed the idea of the age in brutal terms of barocco art. It was reserved for Claude Perrault to translate it into the suaver language of a classicism more congenial to the French taste of the day, which had itself but recently emerged from an era of coarseness.

The stage which classical architecture in France had reached after a century and a half of experiment now crystallised, and was perpetuated till the Revolutionary era by the precept and example of the Academy of Architecture founded at this time under Royal auspices. This stage may be described as a kind of free Palladianism based on study of the antique and of the Italian writers of the sixteenth century, but it did not demand slavish or pedantic imitation; it had the antiseptic of common sense, and was not averse to compromise with such passing fashions in the accompanying decorative scheme, as suited the fancy of the day. Its chief spokesman was the elder François Blondel, the architect of the Porte St. Denis, and its chief exponent Jules Hardouin Mansart.

Le Vau was of the transition and never shook himself free from a hesitation between the smaller scale of Louis' minority and the enhanced one of his personal rule. In remodelling Versailles he formed what is now the central block of the garden front, and in doing so used indeed a flat balustraded roof, but divided the block horizontally into a basement, a principal story with a small order and an attic, and broke it up vertically by recessing the centre between two projecting pavilions between which ran an arcaded loggia. Jules Hardouin Mansart, great-nephew of François Mansart, who succeeded to the post of architect to all the

Royal buildings at Le Vau's death in 1670, was wholly of the new way of thinking. At Versailles he was handicapped from the start, and his efforts to redeem the scale were doomed to at least partial failure. The transference thither of the seat of government, as well as of the Court, necessitated enormous increase of accommodation. Circumstances obliged Mansart to obtain this by throwing out two vast wings north and south in such a manner as to leave Le Vau's work as an unsatisfactory central projection, which has been the butt of criticism ever since. None can have felt the ineffectiveness of this arrangement more than he, but even Louis XIV.'s megalomania must have recoiled from the colossal expense of the only course which could have obviated it, the building of great terminal wings of equal or greater projection. Le Vau's scale was adequate—*à la rigueur*—for the central block; it became wholly insufficient for a trebled extent of garden front. Mansart slightly alleviated the defect by filling up the central recess to form the Galerie des Glaces, by arching the first floor windows so as to emphasise the *piano nobile*, and, on one side at least, by the formation of that Titanic orangery which forms a sort of pedestal for the palace. On the entrance front he introduced a giant order of pilasters in the old brick buildings of the court, and schemed a vast semi-circular forecourt surrounded by an imposing rusticated arcade. Of this, however, the only parts carried out were the two splendid stable blocks occupying fan-shaped sites between the radiating roads. In these he showed what dignity could be infused into a utilitarian building by the use of fine scale, and the introduction, at one crucial point, of a piece of well-conceived sculpture.

Of J. H. Mansart's two masterpieces, the dome of the Invalides, one of the most speaking products of the age of Louis XIV., and of his chapel at Versailles, it is outside the scope of this paper to speak. When they were built, however, Louis had passed the climax of his fortunes, and the declining years of his reign, the longest in history, were a time of increasing failure and disillusion. Europe had risen in arms to repel his arrogant aggression. His exchequer was empty, and the nation, ground down by his exactions and harsh rule, and no longer blinded by the glamour of his government, developed a new boldness of criticism. The Court was no longer an enchanted fairyland of luxurious and dazzling festivities. After Louis' morganatic marriage with the edifying Mme. de Maintenon it became far less amusing. Ponderous State functions and multiplied church services succeeded one another, to the intolerable boredom of the courtiers, who only attended them because they must and for what they could get. Louis himself retired at times for relaxation to the comparative privacy of Trianon or Marly, and the nobles following his example escaped to Paris or the *petites maisons* which began to come into fashion. Even Louis too grew wearied of the solemnity of great symbolical decorations and demanded the introduction of child life into the schemes laid before him. Le Brun died in 1690, but his influence had waned before that, and a lighter more playful manner had begun to be visible in the works of Bérain and other contemporary designers. J. H. Mansart himself began to modify the solemnity of the interiors he designed. Louis' own rooms, remodelled about 1690, are decorated in a noticeably less emphatic manner than the State reception suite. Louis' wish for "de l'enfance répandue partout" took shape in the charming frieze of children of the Œil de Bœuf: and in the chimney-pieces, mirrors, now obtainable in larger sheets than before, began with their dainty frames to replace the monumental compositions of architecture and statuary of the earlier part of the reign. A new age was at hand. In 1715 the old king died unregretted, and was hurried almost unnoticed to his grave. His successor was a child, and the seven years' Regency of Philip of Orleans flashed past in a whirl of frivolous and profligate gaiety. The old pompous Versailles and its tedious etiquette were abandoned, and the Government followed the Court to Paris. The western suburbs began to be covered with a host of new *hôtels* by all the fashionable architects of the day, among whom were Robert de Cotte, Mansart's son-in-law and partner, Cailleteau, his assistant, and Jacques [Jules]

Gabriel, his relative and subordinate in the Royal works. The Hôtel de Matignon, now the Austrian Embassy, by Courtonne, is an example of the type.

The architecture of the first half of the eighteenth century maintains as a whole the massive monumental character and relatively pure classicism of the late seventeenth. The Bourse and *place* on the quay at Bordeaux are typical of the civic architecture of the age of Louis XV. The restlessness of the reaction from the previous solemnity appears almost exclusively in matters of detail: in that same revolt from the supremacy of the straight line and right angle which had betrayed itself at earlier periods. This new tendency of the correct official art of the Court and Capital to relax its formality in the caprices of Bérain and Watteau was reinforced by another influence from Italy. Italian barocco, in revolt against the

BORDEAUX: PLACE DE LA BOURSE (FORMERLY PLACE ROYALE), FROM THE DESIGNS OF JACQUES-JULES GABRIEL, 1730-1751. THE FOUNTAIN OF THE THREE GRACES, BY VISCONTI AND GUMERY, 1869.

From Léon Deshairs' *Bordeaux: Architecture et Décoration au Dix-huitième Siècle.*

formalism to which classical rule was conceived to lead, had consisted at first largely in breaking up and freely recombining in new connections the elements of classical design, resorting in extreme cases to strange perversions and distortions. As the seventeenth century drew on, a type of design was evolved in which the whole effect was obtained by combinations and contrasts of flowing curves, both as regards plan and elevation, and in which definitely classical elements had almost disappeared. It is to this phase that the term " Rococo " should be restricted. In France the old barocco had practically expired before this phase was reached, for there is little in Louis XIV. architecture that can be described by the name; and when the new curvilinear or rococo manner began to creep in, in the last years of the reign, as in the work of De Cotte and Oppenordt, its influence was almost entirely confined to internal decoration and the few ornamental details which architects permitted themselves externally. We thus find the odd contrast of buildings of a serious monumental cast relieved by a few ornaments

of delicate waywardness, while they enshrine rooms decorated with the utmost gaiety and with complete disregard for hitherto acknowledged canons of composition. It is more than doubtful whether such compositions as those of Juste Aurèle Meissonnier, in which the architecture appears to be agitated by a violent seismic disturbance, were intended for anything more than paper fancies. In any case few, if any, buildings were erected in France that can be said to show a thorough-paced rococo character. In plan the swirling lines of a staircase or of a balcony and the rounding off of angles are about the extent of rococo influence, though the searching after new effects brought about a number of plans of a peculiar and ingenious type, of which that of the Hôtel d'Amelot or de Montmorency in the Faubourg St. Germain with its oval court is an example. In elevations rococo elements seldom play a preponderant part. Façades such as those of the Bourse at Bordeaux and the Hôtel Matignon are typical examples of Louis XV. architecture, and in them if rococo forms appear at all it is merely in the design of a wrought-iron balcony, the sculpture on a keystone, the carving of a delicately tapered console, or a dainty spray trailing down an archivolt. With these exceptions the influence of the Louvre Colonnade is very apparent in all secular architecture, and in public buildings it is almost tyrannical. Here the division into three pavilion-blocks and two connecting galleries whether a columnar or, as is more frequently the case, a pilastered treatment be adopted, is general. Elsewhere the rusticated or plain basement, the *piano nobile* with an order at least in one prominent part and an attic above, is almost the invariable rule.

PARIS: DETAIL OF HOUSE IN THE RUE DE LA HARPE (*c.* 1730-40).
From *L'Architecture et la Décoration Françaises aux XVIII^e & XIX^e Siècles.*

In interiors the influence of the rococo had free sway. The Salon d'Hercule at Versailles shows a transitional stage in which the formality of a Louis XIV. scheme with its order and bold entablature is mitigated by delicate palm-branch decoration, the flowing lines of the chimney-piece, the tapering of the consoles, and the breaking of scrolls into the picture frame. This transitional stage is characteristic of the work of the Régence. But soon such relics of classicism as orders and strongly marked cornices were to disappear with all straight lines—except those formed by the vertical sides of the panels—and particularly of horizontal ones, with all deep shadows and bold projections. Everything heavy and formal was eliminated. As to what was introduced, who shall describe it? At a first glance a *salon* of a mansion of the period may appear a disordered riot of twirls and flourishes. A closer study will reveal the consummate art which went to the drawing of the scrolls and to the subtleties of their

arrangement. Like the performers in a courtly dance these curves alternate coquettish advance with coy retreat, they complete and contrast with each other, and combine in a scheme of infinite lightness and gaiety. To view a Louis XV. saloon to-day, when layers of grey paint lie heavy on its carved festoons and choke its delicate modelling, and when its mirrors reflect a bored face, a Homburg hat, a dusty travelling suit and a Baedeker, may be unexhilarating. But let us picture its carved palm fronds sharp from the carver's tool and freshly gilded in several tones of gold, gleaming in the soft candle-light of a score of silver-gilt sconces. Above, a fringe of coral-like sprays or winged shields ripples along a gently curving ceiling, gay with rosy clouds and fluttering birds. Around us smile *fantasias* of apes and Chinamen by Huet, or courtly pastorals by Watteau, or an amorous mythology by Boucher. The mirrors reflect ladies, powdered and patched, pacing a minuet in brocaded sacques with gentlemen in flowered waistcoats, or engaged in a conversation no less sparkling than the gilded rocailles of the mirror frames. We shall then realise that such a decoration provides a finished setting of perfect appropriateness for an age which was great in the charm of its social intercourse, in the brilliance of its *salons*, if in nothing else.

All forms of barocco, and not least this variety, have come in for more than their full meed of abuse, and not infrequently has it been thought necessary to attribute to rococo art all the vices of the licentious monarch whose reign it graced, and to shed moral tears over its degradation. It is time that this mid-Victorian pharisaism which still lingers with us should cease. It might be remembered that there was a time when it was *de bon ton* in architectural criticism to decry "Gothick barbarism" and its "crinkle crankle"; and another, and that not so long ago, when the "pestilent art" of the Renaissance could not be sufficiently abused. When we can lay out a nobler city than Nancy and make of a drawing-room a more fantastically suitable setting for a gay court life than, say, Madame Adelaide's Cabinet at Versailles, we shall be able to afford a sneer at the age of Louis XV.

But if the rococo fashion has been dealt with severely in our day, it did not escape criticism in its own. Reverend seniors of the Academic school felt it incumbent on them to appear shocked at forms for which Vitruvius gave no sanction, and to condemn them by precept, if not by example. But it met with more whole-hearted opposition from men who were caught in a current in the theory of design which was beginning to set in an entirely different direction. Among these was the etcher Cochin, who, in an article in the *Mercure de France* of December 1754, poked fun at the arch-offender Meissonnier. His walls, says Cochin, "bulge so recklessly that it is only by a miracle they keep their balance, his mouldings are so accommodating as to roll themselves up to suit his purpose; the two halves of his designs, so far from being symmetrical, are evidently competing as to which can deviate most wildly from the straight line."

The movement was primarily one of reaction against a fashion which had been carried to excess, which could only please so long as it was used with moderation, and which in any case was of limited range and suited only to peculiar circumstances. Exactly where and when the reaction originated it may not be possible to determine, but it gained force from the general spirit of learned inquiry which pervaded the eighteenth century and brought about researches into the architecture of Rome and Greece both in Europe and Asia. This interest had been greatly stimulated by the rediscovery of Pompeii and Herculaneum. A symptom of it was the expedition of the engraver Cochin and the architect Soufflot to measure the temples of Pæstum. This was in 1750, but the first symptoms of change in French architecture had occurred nearly twenty years earlier and betrayed a Roman rather than a Greek influence. In 1733, that is precisely in the decade when the rococo phase was at its height, Servandony, a young architect of Lyons, who had worked in Rome under the painter and decorator Panini, won the first prize in a competition for a new front for the church of St.

Sulpice in Paris. Not only did this design break entirely with the Jesuit type of front, which for over a century had been supreme in France, but it was conceived in a type of pure austere Roman architecture devoid of all elaboration or trimmings. Within the same decade at least two secular buildings arose which showed the same puristic tendencies. One was the Fontaine de Grenelle in Paris erected in 1739 from the designs of the sculptor Edmé Bouchardon, and the Hôtel Dieu or Hospital at Lyons begun in 1737 by the Lyonese architect Jacques Germain Soufflot. The new taste soon gained the stage and then the court. Servandony and Panini were engaged to design the scenery of the opera, and Madame de Pompadour, the clever lady who for twenty years spent herself in endeavours to keep the ever-bored king amused, was an

BORDEAUX: SALON IN HÔTEL DE M. G. GUESTIER, RUE PIERLOT.
Temp. Louis XVI. and second half of nineteenth century.

From Léon Deshairs' *Bordeaux: Architecture et Décoration au Dix-huitième Siècle.*

early convert. She sent her brother to Italy with Soufflot to study "true beauty," as she expressed it, among the ruins of antiquity, preparatory to taking up the directorship of the Royal works.

The new phase of style which thus began to arise between 1730 and 1750, was practised concurrently with the old between 1750 and 1770, and reigned supreme during the twenty years which preceded the Revolution, has received the name of Louis XVI., who however did not come to the throne till 1774. In addition to its return to purer classical types, and to a general abandonment of flowing curves in plan and decoration in favour of severe geometrical

forms, it is characterised by greater simplicity, that is, it avoids not only twirls and flourishes, but unnecessary breaks and elaborations, and affects quieter lines generally.

Simplicity of expression was also the ideal aimed at by some contemporary writers, who considered architecture from the rationalistic rather than the traditionalist point of view. It owed its counterpart in social life to the influence of Jean Jacques Rousseau, who preached the return to the simple life, open air pursuits and manual labour. To this same apotheosis of country life and its attendant sentimental idealisation of human relations, the style of Louis XVI. also owes a large portion of the elements of decoration: its trophies of hay rakes and straw hats, gardeners' baskets and bunches of carrots, billing turtle doves and pierced hearts, which it intermingled freely with arabesques more closely imitated from ancient examples than had hitherto been the case.

The interior, as well as the exterior, returned to the rectilinear and rectangular. We may see them re-establishing their sway in Louis XV.'s bath-room suite at Versailles. Panels and frames were once more square and unbroken. Cornices and imposts reappeared and symmetry re-asserted itself. With this transformation decoration retained much of the elegance and delicate charm of the style of Louis XV., as may be seen in a salon from Bordeaux (p. 375), but it lost some of its sparkle and vivacity. On the other hand, in some of the more formal examples, as for instance in official buildings like the Ecole Militaire, decoration regained something of the virile character of the age of Louis XIII. and XIV. In architecture proper this virile character was the rule, and a difference from work of the seventeenth century lies principally in more refined detail and ornament, due partly to Greek influence.

CAUDEBEC-EN-CAUX: HOUSE.

The movement did not become general till the conversion of the Royal architect Jacques Ange Gabriel, which took place about 1750. Gabriel was destined to give it its most monumental and suave expression without either the effeminacy which sometimes characterised interior decoration or the frigidity from which the Panthéon, perhaps the greatest achievement of the age, is not altogether free. Few men have ever had greater opportunities than Gabriel, or been so well fitted to use them. He knew all the resources of traditional French design and used them with consummate success, obtaining the same broad massive effects as the seventeenth century had achieved but without their bombast and occasional brutality. His manner recalls that of the younger Mansart, but betrays a more meditative, tranquil cast of thought. The twin palaces on the Place de la Concorde, the result of a competition, the Ecole Militaire in Paris, and the Palace of Compiègne which he rebuilt, are among the noblest buildings of a public character in Europe. That the genius of Gabriel was a versatile one and equally at its ease in the miniature as on these vast canvases is proved by the gem-like finish which he gave to the royal caprice known as the Petit Trianon, one of the last and certainly one of the most perfect of that type of *petites maisons*, which had its origin in the desire to escape the unhomelike splendours of court life. Of the great contemporary masters in public and palatial architecture, whose achievements do not, however, differ radically from Gabriel's, of Antoine and the

Monnaie and Palais de Justice, of Moreau-Desproux and the Palais Royal, of Victor Louis and the Theatre at Bordeaux, time fails to speak. Nor is there leisure at this stage of the evening to linger over the domestic architecture of the late eighteenth century. Innumerable *hôtels* and smaller houses, to be seen in Paris, Bordeaux, and other towns, remain to attest the quiet dignity which characterised it. This charming house at Caudebec also (fig. p. 376) illustrates the same manner.

In works of the school of Gabriel architecture seemed to have reached a stage of breadth and scholarship equal to the expression of all possible needs; but nothing human can be final, and, in certain works contemporary with his, symptoms are to be found of the general unrest in which European society was plunged in the second half of the eighteenth century, signs of a dissatisfaction with established institutions and traditions. For the time being this unrest manifested itself in an intensified archæological tendency. In politics and ethics all manner of theories were based on a somewhat distorted view of the institutions and morals of antiquity.

Château de la Malmaison: Napoleon's Library and Study.

It also became the fashion to copy ancient buildings with a literalness hitherto unknown. In the view taken at the Renaissance, Antiquity was regarded as affording a code of forms and proportions in which to express modern ideas and satisfy modern needs. The antiquarian spirit now began to regard Antiquity as a mine of forms which could be used to conceal the vulgar requirements of modern life. An instance may be seen in the Hôtel de Salm, now Palais de la Légion d'Honneur, where the windowless portico conceals a two-storied dwelling. Working under such influences, two great artists, Percier and Fontaine, evolved a new style of decoration, a pleasant aftermath to the harvest of the Ancien Régime. The so-called Empire style is a sort of Louis XVI. with the warmth and tenderness left out, but possessed of a certain delicacy and a somewhat stiff charm of its own. It is the last phase in the history of decoration which can claim the rank of a style consistently worked out and universally accepted throughout France.

It is not possible in this paper to follow the further history of French architecture, nor to weigh its balance of success and failure. If inspired by somewhat pedantic ideas, and frigid

and formal in expression, many of the monuments of the Empire are deservedly reckoned great; and no account of the Classical tradition in France would be complete which omitted a reference to the great monuments of Napoleon's reign, of which the Arc de l'Etoile and the Madeleine are typical.

Good authorities may be quoted for making the commencement of decadence coincide with the rise of every single new phase in architecture from the fourteenth century to the present day, and as good a case may be made out for placing it in the early nineteenth century as anywhere else, if it must be placed somewhere. I do not, however, wish to be understood as committing myself to that view. Yet after Napoleon all must admit that architectural design fell on evil days and the work of the Renaissance was in some danger of going under. The classic ideal was no longer the sole source of inspiration. A series of clamorous revivals, neo-Gothic, neo-Romanesque and neo-what not, then began to succeed one another. But some of the neo-styles, the neo-Renaissance and neo-Greek for instance, could be grafted on to the old classical tradition, which thus never grew wholly barren. The forms it assumed under Louis Philippe and the Second Empire, however perverse or feeble, had the merit of keeping alive a flicker of the Renaissance flame through a welter of confused strivings and clamorous revivals to become the central, if not the only light of architectural design in the succeeding age.

But if the Revolution or the Empire was not the grave of the Renaissance, why, it may be said, stop there and not carry on the tale to our own day? Many good reasons may be given for doing so, but I would only give a personal one: I stop where my personal interest begins to flag, as that of my audience has, I fear, long been doing.

DISCUSSION OF MR. WARD'S PAPER.

Professor Reginald Blomfield, A.R.A., *Vice-President*, in the Chair.

Mr. EDWARD WARREN, F.S.A.—We have all known Mr. Ward as an author and a scholar, and the applause you have given him shows that you have greatly appreciated, as I have myself, the excellent paper he has just read to us. In it he has maintained his own high standard, and added interest to a subject which at the moment is peculiarly interesting. I find myself in general accord with all that he has said, and differing only on one point,—a matter of expression. This may seem to be a quibble about words, but the distinction is, to me, not without importance. In his opening sentence Mr. Ward says "No country outside of Italy made the teaching of the Renaissance in architecture so thoroughly her own as France." I should like to ask him to amend that sentence. I think France did not accept the *teaching* of the Renaissance so unreservedly, simply, and wholly as did some other countries, notably our own. That she assimilated the spirit of the Renaissance, and that with such amazing rapidity that she instantly caught the suggestions and nationalised them, is undoubtedly true. But the quick, clear, perceptive Gallic spirit was too active and too adventurous for French architects to accept the Renaissance teaching with the thoroughness and docility that some other countries showed. She nationalised her acceptance so quickly, she evolved so rapidly a style of Renaissance which was unlike any other, that I think one of the chief fascinations of the study of French Renaissance architecture is the evidence of the strong racial instinct and tradition reacting on the suggestions of the trans-Alpine ideals. Mr. Ward has in some ways, perhaps unconsciously, reinforced that view. He said, and I think it is perfectly true, that if you are at all versed in French architecture you are very unlikely to mistake the nationality of a piece of French Renaissance work. I do not think the acceptance of the literal teaching of the Renaissance was so complete or so humble in France as in England. In England it came a great deal later, at a time when France was practically teaching her teacher; and, at the end of a few decades, the influence of France was rubbing off on other countries. By the end of the eighteenth century it was rubbing off on all countries except this. But England, at that period, was always at daggers drawn with France, and consequently did not assimilate French influence as did other countries. In Holland you may occasionally find thoroughly French-looking buildings early in the eighteenth century, or at the end of the seventeenth. In Spain and Italy you will find, similarly, an almost exact French version of Italian Renaissance. Mr. Ward showed that the constant wars of France, which carried her arms beyond the Alps, had much influence in promoting her desire to import Italian artists and copy

Italian examples. That is true, and he has shown us that there were also more peaceful contacts arising from the fact that Italians fled from their disturbed country to France to find a field of industry there. In France, as in England, you find isolated early instances of the direct employment of Italian artists. There is one in the little-known church at Folleville, a few miles north-east of Beauvais. Raoul de Lannoy, who had been envoy or ambassador at Genoa, had brought back an Italian artist to carry out the beautiful tomb for himself and his wife, which I saw a few years ago. One feature which shows how strong and conservative is the architectural instinct of France, is that excessively high-pitched roof which you see in early and late French buildings long before Perrault or the Mansarts. That high-pitched roof which is appropriate to the French use of small flat tiles and smaller slates would not have been appropriate to the heavy Roman form of tiles used in Italy. It arose and was preserved, probably in part, on account of the extreme importance, in French domestic economy, of the "grenier" for all sorts of purposes. The high-pitched roof with the relatively small projection of the cornice give to the buildings of the later French Renaissance a peculiar type which is entirely non-Italianate. The high-pitched roof surmounting the corniced and pilastered building below frequently has a most incongruous effect. The French architects were not as happy as were the architects of England and Holland in building with brick without the intermixture of stone. They almost always contrived to have the stone quoins and dressings when they used brick. In Toulouse indeed there are buildings of brick, without stone, but they are rather dismal in effect. They do not seem to have rejoiced in the use of moulded and cut brick, as we did. I am sorry that, among the large number of slides Mr. Ward showed us, there were few of the many admirable smaller houses which abound in French provincial towns, such, for instance, as Valognes, Abbeville, Laon, Beauvais, and Dijon, which are full of interesting small seventeenth-century and eighteenth-century houses replete with lessons of architectural harmony, proportion, and refinement of detail. You may study in the provincial towns of France not only those qualities, but the magnificent disposition and fine and stately proportions of great civic schemes. Where can you find anything better, even in Paris, than the three beautiful "places" of Nancy, the Places Stanislas, de la Carrière, and du Gouvernement? I have the greatest pleasure in proposing a hearty vote of thanks to Mr. Ward for his most admirable and interesting paper.

Mr. H. H. STATHAM [*F.*]: I wish to second most heartily the vote of thanks to Mr. Ward for his remarkably able paper, which has given us a sort of *résumé*, in word and illustration, of the history of the French Renaissance. There is one particular quality in which the French Renaissance seems to be so very interesting, a quality in which it differs from the Italian. The Italians never really took to Gothic, so as soon as they got hold of the Classic idea again they began to reproduce it in more or less Classic form. The French had behind them a great period of a most romantic style, of which they were practically the inventors, and I think it is owing to this that the early French Renaissance took such a peculiarly picturesque form, quite different from the correct but comparatively cold way in which it was developed in Italy. And I must say that, whatever may be said about the mixed style of the early French Renaissance—a mixture of Classic and Gothic detail—it has a very great fascination; I think it is one of the styles that has done more than anything else to add to the happiness of mankind. Whenever I go to the Louvre I feel that Perrault's east front is the prose of it, and that when you come into the court-yard that is the poetry. And although it may be open to a great deal of criticism as to detail, it is picturesque and beautiful to the highest degree. The comparison which we heard made between Perrault's front and the building by Gabriel at the top of the Place de la Concorde is worth attending to, I think, because it seems to me that the introduction of that open arcade at the foot of the elevation makes all the difference between it and Perrault's. Perrault's design is weak, and his ground story does not seem to have sufficient power to support the superstructure. When you get to Gabriel's façade you find a different thing. He has got a deep shadow both in the ground story and upper story, and the result is far more satisfactory. With regard to Versailles, I have always felt it to be what some eminent author called it, "a lumber of littlenesses." I think there is no example on earth of so large a building with so little that is stately about it. There is not a decent staircase in it. The worst point about it, the projection of the centre of the garden front, has been explained by Mr. Ward in his plan in a way that I had not quite realised before. I find that in order to preserve the brick château he was compelled to do something, but it is a lesson in architectural composition to look at that and see that in consequence of the projection of the centre you can never see the whole front from any point of view. The projection of the centre is a complete mistake in a Classic front. One question I should like to ask Mr. Ward, and that is, What is the positive evidence that Servandoni was a Frenchman? The last and latest dictionary, Russell Sturgis', says he was born in Florence, and gives three Italian authorities at the foot of his articles. And even if you put *y* instead of *i* at the end of the name, "Servandony" is not like a French name, and it surprises me very much to hear him spoken of as French.

The CHAIRMAN: We have had a most interesting and suggestive paper from Mr. Ward, and he

has handled an extremely difficult subject in a masterly way, because he has had to compress into about an hour and a quarter a history comprising about 300 or 350 years. Anybody who has tried to do that will know what a considerable feat it is. And it is peculiarly difficult in the case of French Neo-Classical, as I prefer to call it, because not only is there an enormous quantity of instances of this architecture in France, but also it must be remembered that the French are a tremendously vital race; they have never lost touch of their tradition. It is not like the Renaissance in Italy, which you can deal with and attempt to classify, and which in the eighteenth century more or less disappeared. But France has never been in that position. That country has always maintained, by a very scanty hold, some thin thread of tradition. There are one or two slight points of detail on which Mr. Ward said he expected I might quarrel with him a little. These I will get through quickly, because there are other broader issues on which we agree, and which I would like to call your attention to. In regard to detail, the first point was in reference to the elder du Cerceau. Mr. Ward ranked him with de l'Orme and Bullant, a fully equipped architect. I am convinced this is not the case. In spite of the ingenious hypotheses which were brought forward by de Geymüller, the evidence is really the other way. I have gone into it at length elsewhere, and will here simply repeat my opinion that the elder du Cerceau was a very admirable draughtsman of historical buildings, but, on the other hand, was a fabricator of the most poisonous designs it is possible to imagine. There was a slight error with regard to Coligny. The house at Tanlay was not built by the Admiral, but by his brother, François d'Andelot, who was Colonel-General of Infantry of France, and came into the property in 1559. The man who had the outer gateway built in 1610 was Jacques Chabot, Marquis de Mirabeau. And it is a curious and very interesting building. There was another point on which Mr. Ward expected I should differ from him, and I do,—viz. with regard to Primaticcio and his position as an architect. That has been maintained by M. Dimier in an eloquent way, but the evidence had to be severely strained. I would say definitely that my opinion is that the view of Monceaux by Perelle shown us to-night is not of the date of Primaticcio, but of the date of the early part of the seventeenth century. With regard to the colossal order, it was used by Bullant, and therefore it was more or less common property. There is another point of detail, and that is the supposed Flemish influence on the French architecture of Henry IV. I have no great faith in that Flemish influence myself. It is true, as Mr. Ward pointed out, that painters from the Low Countries, including the great Rubens, did decorative work in France, but I think the cartouches and other details which we are familiar with, apart from the pernicious influence of Du Cerceau, De Vries, and Dietterlin, were a French version, rather clumsily carried out, of what was being done by architects in Italy, and it would be easy to bear that out by illustrations. Leaving mere details, and coming to Mr. Ward's general survey—with that, as I say, I am in agreement; I think it was extremely well done, and he gave us a very good idea of the whole range of this vast subject. There are one or two points I would like to call your attention to, particularly with regard to the first 160 years. That splits up, I consider, into three distinct periods. The first is the period of the amateurs, and ended with the death of Francis I. That King, and those who had served with him in Italy, came back full of admiration for the art of that country, but they did not understand its architecture and insisted on the native builders carrying it out as best they could. Indeed, as Mr. Statham pointed out, part of the charm of this early work was the struggle of the traditional spirit of France to assert itself in an alien dress. By the time Francis I. died they got a good deal of ornament, but very little real architecture. Then we come to the second period —that is, the period of the architects proper, who now emerge for the first time on the stage, de l'Orme, Bullant, Lescot, or Goujon, the elder De Brosse and the younger du Cerceau. And they had a very good time as long as the Court lasted—for it was a Court affair, and when the Court failed they went out with it. And you will recollect the course of the tragedy, first the Massacre of St. Bartholomew, and then the general catastrophe: the murders of the Guises, the assassination of the last of the Valois, the obscure death of Catherine de' Medici. There is general chaos, and in the last few years of the century very little was done in the arts. Then we come to a reorganisation under that magnificent King, fighter and statesman, Henry IV. of France. He put the whole of France on its legs again, and laid the foundations of the French Art of to-day. To me it is that period which begins with the accession of Henry IV. and ends with the death of Mazarin that is in many ways the most important period in French architecture, because in that time this art which had been first an exotic, then a fashion of the Court, became finally the vernacular art of France, and it found its most perfect expression in the art of François Mansart. I think Mr. Ward might have laid more stress on the organising work of Colbert. He so organised the arts that France took its position at the head of art in Europe, but his work contained in it the seeds of decay —that deadly concentration of the arts on the Court and on the fashion sapped the vitality of the French genius, and undid the splendid work of Henry IV. On the whole general question, Mr. Ward's paper lends some colour to the statement which is sometimes made, that all art moves in a

circle, that we merely move from one fashion to another, and from one law to another, and eventually get back to the same point, and that really the only method of solution is to have some catastrophe like the French Revolution to clear the air so that we can begin again. I admit there is evidence to support that up to a point: but I do not believe it, and I think it has got about because writers on architecture mistake ornament for architecture; and when they should be writing about architecture they are writing about ornament and decoration. I need hardly suggest in this room that ornament and decoration are not the same thing as architecture, though, of course, they are closely connected with it. The qualities of scale, of proportion, of planning, and the power of dealing with masses of building, these are the great qualities of architecture, and it is possible to trace progress here and even some consensus of practice. The Mansarts, and that Jacques Ange Gabriel whom Mr. Ward so rightly appreciates, all worked in different manners, and yet attained these qualities each in his own way. It is good for us architects that progress is not in a circle, a perpetual dance round the mulberry bush. And this is the conclusion that I draw from this survey for the student, to pay no attention to fashions *qua* fashions, but to study incessantly the works of the great masters of the past.

Mr. WARD: Before saying anything in reply to the speeches which have been made, I should like to thank very heartily Mr. Northover for the great trouble he has taken over the preparation of the slides kindly provided by the Institute for this lecture—that is, about half the slides we have seen—and Mr. Allan Potter, who kindly lent me the remaining half made from very beautiful photographs of his own. In reference to what the speakers have said, I cordially accept Mr. Warren's amendment to the first sentence of my paper. He has only expressed a great deal better what I meant, but what I failed quite to bring out. I think that in his further remarks he was a little too sweeping in stating that French influence did not have any great effect in England. I have been very much struck lately in noticing certain things that I have come across which seem to follow the French manner of just twenty or thirty years before. For instance, I was at Worcester a few days ago, and there I saw several monuments in churches and the cathedral which might have come straight out of such books as those of Barbet or Collot, who published designs of altars and chimney-pieces and tombs about 1630. These monuments in Worcester, which were of a type common in other parts of England, date from 1660 to 1670. And in the eighteenth century one finds the Rococo type of ornament especially in ceilings scattered about England, but all rather later than would be the case in France. There are a few details of that kind where French influence is directly traceable in this country. In reference to what Mr. Statham said, I agree that there is a very great interest in the period of transition and the early period of the Renaissance in the fusion of the two styles. It gives a picturesqueness which is, perhaps, not obtainable in any perfectly pure style. With regard to what he said about Perrault's colonnade and the court of the Louvre, possibly the François I. work generally is rather nearer to poetry, lyrical poetry; but that is not the only kind of poetry. And the Louvre of Perrault might be compared to the stately Alexandrine measures of Corneille and Racine with whom he was contemporary. The poetry of the late seventeenth century in France is often considered somewhat prosaic. But that is rather an unjust criticism, because there is much poetry in Racine, though it is somewhat concealed by the rigid regularity of its form. In regard to Versailles, it is hardly fair to criticise it on the ground of the lack of a staircase. It has one fairly fine staircase, known as the Queen's Staircase, in the left wing; and the King's, or rather the Ambassadors' staircase, by Le Brun, which was in the opposite wing, was a most magnificent work, but was swept away by later alterations. Originally it had two grand staircases, and one of them is left. With regard to the evidence as to Servandony, I cannot at present remember my authority, but I hope some day to give it to Mr. Statham. I do not feel inclined at this hour of the evening to break a lance with our Chairman over Du Cerceau, Primaticcio, and Monceaux, but I should like to take the opportunity of offering a tribute of admiration to the great book which he has given us on the subject dealt with this evening. It is not only a monument of scholarship and criticism, but it is a great piece of literature. I can only conclude by warmly thanking the mover and seconder of this motion, and our Chairman, for the kind and far too flattering way in which they have spoken of me; and to thank you all for passing this kind vote of thanks.

Writing since the meeting, Mr. Ward says: Geymüller, in his *Baukunst der Renaissance*, pp. 427–8, states (1) that the "châtelet" or outer gatehouse at Tanlay was built between 1568 and 1571, quoting as his authority articles by H. E. Petit in the *Bulletin de la Société Nationale des Antiquaires de France*, 1886, pp. 208–12, and 1887, pp. 160–3, based on the existing building accounts; and (2) that it was built by Admiral Coligny; no authority is quoted for this, but the waves and cables which occur in the rustication may well be allusions to the office of admiral, like the ship's prows at the Palais Cardinal and the dolphins at Richelieu.

The question of the date of Monceaux and its ascription to Primaticcio is discussed fully by Geymüller in *Baukunst der Renaissance in Frankreich*, pp. 400–410.

In reference to du Cerceau's arabesques, I find that he got his ideas from the Italian decorations of Monceaux and other royal houses.

REVIEWS.

A NEW GOTHIC HANDBOOK.

Gothic Architecture in England and France. By George Herbert West, D.D., A.R.I.B.A., Vicar of Selsley, Gloucestershire. Pp. xxxii and 337, and 300 illustrations. 8o. Lond., 1911. Price 6s. net. [Messrs. George Bell & Sons, Ltd.]

The best test for a book is found in the two questions "Was it worth reading?" and "Is it worth reading again?" In this case there can be no difficulty in finding a ready reply to both questions.

TOUR DE BEURRE, ROUEN, SHOWING ALSO THE BUTTRESSES OF THE NAVE.

Dr. West has given us a handbook which, in the present writer's opinion, is far in advance of anything of the kind yet produced. In a recent speech Lord Haldane reminded us that there is a point in our mental development where we become cosmopolitan. To understand Gothic aright we must reach that point. This is, in fact, the key to the book; and in the introduction we are told only too truly that English Mediæval art is presented to us, as a rule, without reference either to our national history or our relations with our neighbour. All this is corrected and given due consideration in this work.

It is, of course, next to impossible to compare the lily and the rose with a view to awarding the palm, but Dr. West gives most clearly the similarity and dissimilarity of the art in the two countries, in construction, development, history and otherwise. One of the most interesting chapters is the first, in which we have the development of Christian architecture. The author inclines to the belief that the Roman town house formed the basis of the church plan. It is interesting to note that the congregation occupied the aisles, the choir reached far down into the nave (which was open to the sky); and further, as Vitruvius tells us, that basilicas were attached to the houses of those holding public magistracy. May not survivals of the former be found in old cathedrals and abbeys where the first few bays of the nave are apportioned to the choir, and in the latter by the fact that early churches in England were often built as private chapels to manor houses? When the congregation occupied the aisles, the men were on one side and women on the other. Sometimes the churches were built in two stories. A good view is given of the magnificent church of S. Lorenzo, Rome, showing the women's gallery above; and a similar arrangement obtained at Santa Agnese. This early arrangement survives still in the "Männerchor" at Limburg-on-Lahn, except that men are upstairs and women down. Can the wide triforium at Gloucester have had a similar use? In conjunction with this one would like to ask whether the double chancels, one above the other, at Schwarzrheindorf, Compton, Darenth, and Melbourne (destroyed temp. Henry VII.), may not be developments of that arrangement.

One is glad to note that in later work due recognition is given to the influence of the Comacine Masters. While Dr. West does not go all the way with Leader Scott, it is pleasing to see that he does not say any hard things. For my part, I have never been able to understand the hard criticisms levelled at Leader Scott (Mrs. Baxter), and have sometimes wondered whether those criticisms were the result of the writer being a woman who had stolen a march on the male sex. When we think of the geographical position held by the Comacini, a point where the streams from the East *viâ* Ravenna and from the South *viâ* Rome met, would it not be extraordinary if nothing unusual occurred in the concentration and formulating of ideas? Anyone who has been in Lombardy cannot fail to be struck with the simi-

larity of the work there and elsewhere, and how is this similarity to be accounted for if Mrs. Baxter's theory is not accepted ? Anyway, one is glad to see that Dr. West is not afraid to believe in Comacine influence.

The greater part of the book is, of course, taken up with the actual subject—namely, Gothic architecture in England and France. As regards the cathedrals, we are shown in a clear manner how the French cathedral was the centre of civic life. In England, towns were never the same thing as in France, and the English cathedral is a sort of rural seclusion. In France, Gothic is "the expression of the nation's soul, while in England it is the expression of the nation's history." It is strange that civic life has never been a strong point with Englishmen, and so we find our cathedrals are a thing apart. We have ever been a race of country bumpkins, which accounts for our towns being such eyesores and town planning making such a poor show. The only thing in which the English lead the way is the water-carriage system. In everything else we have been content to follow our betters—a long way behind.

Mr. Sneyd Kynnersley, in his interesting book *H.M.I.*, says there can be no doubt that the Church is divine from the fact that the clergy have been unable to wreck it. Substitute English greatness and Englishmen, and the same still holds good. Let me quote Dr. West (page 324), "As regards ourselves, it was the same national characteristic of 'drift' which is ours to-day, and which takes us muddling along with no definite aim or plan for the future, taking up the fashion of the moment in art or literature, trusting to luck to carry us through in war or in political life." These words ought to be framed and hung up in every house as a warning, for at no time have they been more needed than the present. There is a literary style all through the book, and a healthy manly vigour that is quite exhilarating.

A good feature is the tables of buildings and dates, which will prove very useful for reference, especially the kind of chart at the end of the book, in which French and English buildings, styles, and dates are cleverly arranged.

We all like the sun, but we prefer it without spots. So with this work. A second edition is sure to be called for, and it would be well if certain mistakes could be avoided. The style, as has been said, is all that one could wish, except that a careful reading would remove a few—quite few—errors. In one case "which" is used when it should read "the latter of which."

On page 12 and elsewhere the term "confessio" is used, but no explanation is given either in text or glossary. Having regard to the extraordinary confusion in the public mind in matters ecclesiastical, the term is sure to be taken by some as meaning "confessional."

NORWICH CATHEDRAL: THE APSE (1098).

On page 13 we have an interesting account of the introduction of the alternate use of piers and columns, but on page 206 the author has failed to notice that Norwich Cathedral was originally piers and columns. There is unmistakable evidence of this, but it is surprising how few archæologists seem to be aware of it. After a fire the columns were recased and transformed into piers. The fires in the nave were in 1174 and 1463. The building was begun in 1096. It is interesting to

note that, whichever fire it was, the old work was copied, and not a casing applied in a new style. Certain it is that the interior gains by the disappearance of the columns. One pair is left to mark the first bay of the ritual nave—that is to say, the bay immediately north and south of the site of the nave altar. The position the rood-screen held can be plainly seen, and one can only hope that the powers that be will erect a new rood, rood-screen, and nave altar, and thus undo some of the disastrous work of the Reformation.

Another statement about Norwich (page 161) also calls for comment. What proof, one would like to know, is there that western towers existed at Norwich ? A pair of converted columns marks the first bay of the nave from the west (page 206). Would the Normans have rested one corner of their towers on circular columns ? I trow not.

Many will be surprised to learn that relics, pilgrimages, and devotion to the Virgin Mother were peculiarly English, and that the great length of English cathedrals was due to the provision of Lady chapels to provide for the last-mentioned. I would like to add that at Southwell, where the Minster is dedicated to the Blessed Virgin, the extension eastward appears to have been brought about in part by the need for increased accommodation in the nave for the Whitsun synods.

On page 169 it is suggested that the Saxons may have got the idea of the western tower from French sources, and three instances are given from which " the Saxons may have got the idea." But is not St. Rémi at Rheims eleventh century, St. Ricquier late Flamboyant, and is not Basly illustrated on page 157 and dated 1140 ? How then could these have influenced the Saxons ?

On page 198 the wording makes it appear that Westminster is a translation from the French of St. Denis. This should be made clearer so that while it may be seen that Westminster is our St. Denis, yet Westminster is not a translation of St. Denis but of Rheims.

When were tabernacles for Reservation first used ? Is not the reference to tabernacles in conjunction with Norman work somewhat of an anachronism ? (Page 201.)

On page 202 Steetley is given as " Notts," it should read " Derbyshire "; and " Sandiavel " (page 274) should read " Sandiacre."

In the chapter on vaulting, a most stimulating chapter, one cannot help feeling that a few more diagrams in the text would be useful, showing the various styles of vaulting, and also showing the contours of the ribs superimposed. Page 304 would also benefit by a diagram of the roof-truss referred to.

As has been said, the above criticisms refer to spots on the sun. The book is so good that one is sorry to make any adverse comments. The work should prove of service not only to architects, but also to that increasing body of students who attend University Extension Lectures on Gothic architecture.

Messrs. Bell are to be congratulated on the manner in which they have produced the book. The photographic reproductions are good, and most of the originals have been taken by Dr. West himself and are therefore taken with a purpose. There is a splendid photograph of the east end of Norwich at page 104. Why are photographers, as a rule, so afraid of taking a symmetrical building on the only line that can give a symmetrical result ? Surely page 104 ought to convince them. In the next edition, could not the reference to Strasburg (page 239) be illustrated with one or two views of that marvellous west front ? It is a treat to see the delightful woodcuts of Orlando Jewitt again, and the blending in the illustrations of " ancient " and " modern " is a happy idea. These woodcuts are from Bloxam's book. Dr. West tells us that his work is the result of an attempt to rewrite Bloxam. One can only say that Bloxam would rub his eyes in appreciative astonishment ; the only things common to the two works are the spirit animating both writers and Orlando Jewitt's woodcuts.

The author concludes by asking " Is it better to aim at a lofty ideal which, proving beyond our reach, may become a mere dream of Heaven, or to be content with a lower one within our grasp, even though it may keep us bound to earth ? " Surely the true answer is that what we need is the right spirit governing the work of our lives and the work of our hands. Let us quote Dr. West (page 118) : " Each workman therefore had a personal interest in his own particular stone and in its success . . . it had a sort of personality distinct from the others. Just as he himself had." " This is why the machine-made perfection and regularity of modern work seems so dead ; it is dead, it has in it no spark of human life, tells no tale of loving labour." " There is just the same difference between the results of the heartfelt personal labour in mediæval days which brought joy to the worker, and those of the organised irresponsible gang-work of Roman and of modern times." Now let us ask what it was that killed Gothic. It was the undue accumulation of wealth. All historians worthy of the name are agreed that the charges were greatly exaggerated, yet the monasteries were dissolved, and that because they had fallen away from their ideals by unduly accumulating wealth. Greed begat greed, and they fell. With the opening of the Perpendicular period begins our modern commercial system, and the Perpendicular style was kept going by and dominated by commercial wealth. So in the present day the craving for wealth crushes the right spirit, and art cannot flourish as she would. Just as the undue accumulation of wealth brought about the downfall of the monasteries and of Gothic architecture, so will it bring about the downfall of what are called some-

times the governing classes. The writing is on the wall. The more that wealth is accumulated unduly, the more difficult is it for the remainder of the community to thrive. Man has forged bands of iron to his hands, his feet, his neck, and he has forged chains which hold him tight in prison. Something will happen, but Man must carry his bands and chains till they have rusted from him. Upheavals are bad for architecture. She, of all the arts, suffers most. Troubles are ahead, but let us hope that after they have passed away, the right spirit may again prevail, and architecture become once more the pride and wonder of the world.

Derby. GEORGE H. WIDDOWS [*A.*].

CROXDEN ABBEY.

The Abbey of St. Mary, Croxden, Staffordshire: a Monograph. By Charles Lynam, F.S.A., F.R.I.B.A. 4*o. Lond.* 1911. [*Sprague & Co., Ltd.*, 69 *&* 70 *Dean Street, Soho, W.*]

In this large and handsome quarto Mr. Lynam has produced a work which is a credit at once to him as an archæologist and a practising architect, a combination now not common. Croxden is one of the Cistercian abbeys, and, according to the Chronicle printed by Mr. Lynam at the end of the volume, was founded by Bertram de Verdun in 1176 at Chotes or Chotene; but, as at Byland, another site was preferred, and in 1179 the monks came to Croxden. The first abbot, Thomas, was elected in 1178 and ruled till 1229. The monks seem at first to have lodged in temporary rooms, probably of wood; the first thing done being to build the church. The latter belongs to the time of Abbot Thomas; whereas most of the claustral buildings were built between 1242 and 1274, and the rest of the monastic buildings chiefly in the early part of the fourteenth century. The church internally was 235 feet long; the nave, as at Kirkstall and Roche, contained eight bays; this seems short, considering that the presbytery was only of two bays, but it is to be remembered that Cistercian naves were not built, like those of Benedictine Monks and Austin Canons, for use or part use by the laity; indeed, in the remote and sequestered vales where Cistercians built, no lay worshippers were to be expected. The Cistercian nave was therefore built, not as a nave in the ordinary fashion, but as a double choir; the front part of it being occupied with the stalls of the monks, and the back part with those of the *fratres conversi*. Each transept, as at Kirkstall and Roche, had two rectangular eastern chapels. The great peculiarity of the plan is that the short presbytery was apsidal, and that the apse was encircled by a procession path, out of which radiated five semicircular chapels. Such a plan was alike non-English and non-Cistercian. In England it had been the favourite plan in the greater churches up to about the middle of the twelfth century, but had gone out of use when Croxden was founded. In Burgundy, the native home of Cistercian architecture, the periapsidal plan had here and there superseded the simple rectangular plans which we copied at Kirkstall; periapsidal presbyteries of great importance being built at Clairvaux and Pontigny. Mr. Brakspear has shown that the plan of the former was closely copied at Beaulieu in the New Forest, which was founded in 1204, and consecrated, wholly or in part, in 1246. But the periapsidal plan of Croxden, like that of Hayles Abbey, Gloucestershire, also set out by Mr. Brakspear, of which the chevet was built between 1270 and 1277, is not that of Clairvaux or Pontigny; it is just the normal plan of the cathedrals of the Ile de France, a plan of which we have such a noble example in Westminster Abbey. So that as regards English Gothic the chronological order of the periapsidal chevets would seem to be (1) Croxden, (2) Beaulieu, (3) Westminster, (4) Hayles, (5) Tewkesbury; the last being a fourteenth-century remodelling of an eleventh-century chevet of the same plan.

The book contains, in addition to letterpress, no less than seventy-seven plates. It is a worthy memorial of one of the soundest and most experienced of English archæologists, one who has been familiar with Croxden ruins since 1850, and who now, *strenuus idemque indefessus*, issues this monumental volume in the eighty-second year of his age.

FRANCIS BOND [*Hon.A.*].

CORRESPONDENCE.

Architectural Education.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—The admirable exposition of the general principles of Architectural Education given by Mr. H. P. G. Maule in his paper read to the Manchester Society of Architects, and published in the JOURNAL of the 10th February, forms one of the clearest constructive explanations of an exceedingly difficult subject that we have yet been favoured with.

The quiescent attitude of the whole profession on a subject which is not only necessary to its existence, but transcends its boundaries in the noble work of creating and fostering the national taste, as Mr. Maule has so ably described, is to be explained by the carelessly narrow view taken of the matter by the bulk of the profession, who selfishly consider themselves too busy to be occupied with the subject after they have passed the Rubicon of Examination studies prescribed them by their teachers and masters. The perfunctory interest of the principal, the vacillation of the assistant, and the submissively proper attitude of the pupil combine to form a discouraging picture for the educationalist.

The "personal equation" in the production of architectural design usually contains at least three factors, all of which vary in force, whilst at the same

time maintaining certain necessary relationships to one another rarely conducing to a good result. The components of this equation are the client, the architect, and the assistant, and any aspirations towards sound taste and judgment in either of them are often brought to naught by the other two. The displays of pictorial architecture in our streets are not designs; they are compromises. The conditions necessary for design, in its proper completeness, are rarely met with. I believe Mr. Paul Waterhouse's proposals, in relation to Town Planning, to be the only corrective to the continued appearance of these compromises in our streets during the lapse of the twenty years which Mr. Maule assigns to the "Period of Consolidation and Building up," which will connect the present with the Registration *régime*. Nothing short of the continued rejection of these compromises by a legal authority will inspire the public with confidence in our unaided ability to produce a design. During this "Period of Consolidation," the course of architectural education is a clear one. It should be more closely allied to the problems actually met with in practice; and instead of students occupying their time with the more specialised forms of study at the early stages of their career, these should be reserved, as Mr. Maule points out, for the advanced and "post-final" stages. Mr. Maule rightly objects to the present standard of passes in the Intermediate and Final Examinations, and speaks of incentives to advanced studies.

Education during the "Period of Consolidation" may be greatly improved for the benefit of architecture by offering the incentive of certain definite salaries to the present-day student serving the interests of the profession as assistant, corresponding to the various stages of knowledge marked by success in the R.I.B.A. Examinations. This can only be done when the results of these examinations inspire confidence in the business instincts of the profession, and will be readily and immediately appreciated when it is observed that those students who pass are capable assistants. It will mean that Mr. Maule's compulsory insistence upon a general architectural training for four years will be automatically brought into effect, for the crammed and coached student would rarely maintain his place in practice. Unfortunately the usual meaning attached to "advanced studies" is "ideal" studies, and ideal studies imply a lack of the trammels and fetters which present-day practice has to grapple with. It is doubtful whether "ideal" study is of any advantage to architectural education, inducing, as it does, a desire to set aside practical obstacles and inconveniences in the production of design.

I wish to consider now what will occur under the Registration *régime*. It is evident that not only is the course of study proposed by Mr. Maule a very costly one, but that such a course is necessary for the future of Architecture under Registration. It follows that the exercise of our profession must be confined to men of some social standing. If therefore, for the sake of cheap labour, we allow assistants to enter the profession, under Registration, who are unable to pay the cost of this special training, but find a faulty substitute in that found at the various technical schools, we are evidently allowing a gross injustice to grow up beneath our feet. We shall be guilty of luring a class into existence and gracelessly leaving them in a *cul de sac*; for assistants of this type would not be able to find the time and cost for the education and examination required by the Registration Authority, and consequently could never practise. Besides placing a term to the ambitions of the best of this class, we shall be placing them in competition with the assistant who is engaged in passing, or has passed, the examinations of the Registration Authority, thus lowering the general level of salaries to which the latter are undoubtedly entitled. The remedy for this is, that the proposed Bill should contain a clause to the effect that: "Practising Architects should employ only Registered Assistants." As we have found no difficulty in defining "Architect," we have none in defining "Registered Assistant." He is a person who has been articled, and who has passed, or is engaged in passing, the examinations of the Registration Authority.

Mr. Maule speaks of the inevitability of the reorganisation of the scale of charges and fees, and the feasibility of augmenting these with relation to specialised practice, thus offering an incentive to men who are prepared to spend a longer time on education. I suggest that the assistant may justly be considered and improved in this respect for the same reason.—Yours faithfully,

ERNEST J. DIXON [*A.*].

Representation of Licentiates on the Council.

Bedford: 18*th March* 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—I have read with much interest the proceedings at a recent meeting as to the value or otherwise of "Associate" representation on the Institute Council. There are many Licentiates recently admitted to your ranks who, although not having qualified by any statutory examination, are sound, "practical" men—not theorists—men whose practice is to them their sole means of subsistence. If any alteration is made in the constitution of the Institute Council, this class (to which I am glad to belong) should not be overlooked in a direct representation on the Council, so that the long-delayed registration movement may have first-hand evidence in its support from those who are the principal sufferers through the non-existence of any legal protection in their profession.—Yours truly,

W. B. STONEBRIDGE, *Licentiate.*

9 Conduit Street, London, W., 23*rd March* 1912.

CHRONICLE.

The New Indian Capital: Appointment of Advisory Committee.

The Secretary of State for India has, at the request of the Government of India, appointed a committee to advise the Government of India as to the site and laying out of the new capital at Delhi. The Committee will consist of Captain George Swinton, who has just been elected Chairman of the London County Council; Mr. John A. Brodie, C.E., City Engineer to the Corporation of Liverpool; and Mr. Edwin L. Lutyens [*F.*]. Mr. H. V. Lanchester [*F.*] it is proposed will join the Committee, which will assemble at Delhi about the middle of April, where it will find materials ready for consideration and will have the assistance of the Department of Indian Public Works and of other Departments of the Indian Government. It will act under the instructions of and report to the Government of India. Its work, which will be of a general and preliminary nature, and will involve no questions of detailed planning or architectural design, is expected to occupy four or five months.—Captain Swinton, who has spent more than ten years on the London County Council, has always taken a keen interest in questions of town planning and improvement, roads, and traffic, and has been an active member of the various Council committees dealing with these questions. Mr. H. V. Lanchester was Hon. Secretary of the Papers sub-committee of the Town Planning Conference 1910, and Mr. Lutyens a member of the Executive Committee; both are members of the Town Planning Committee of the Royal Institute.

The Northamptonshire Association of Architects.

At the General Meeting of the Royal Institute on the 4th March, the President announced that the Council, acting under By-law 78, had admitted the Northamptonshire Association of Architects to alliance with the Royal Institute. The Association was established in 1911, its objects being the promotion of union and professional integrity among its several classes of members, the establishment, as far as possible, of uniformity of practice, and the general advancement of architecture and the various arts and sciences connected therewith. It consists of four classes of members—viz. (1) Members, who must be architects in practice as principals; (2) Associates, consisting of architects' assistants or articled pupils; (3) Honorary Members; and (4) Associated Craftsmen. The Association numbers at present twenty-two Members, but it is hoped that Associates will join during the ensuing year. The President is Mr. J. A. Gotch, F.S.A. [*F.*]; Mr. S. F. Harris [*F.*] is Vice-President, and Mr. Herbert Norman Hon. Secretary. Although in existence but a few months, the Association has already done useful work for the profession in the district it was formed to serve. It should prove of especial value as representing country architects, whose work is so much more varied than that of their brethren in the large towns. The Association is fortunate in being the tenant of the Northampton Architectural and Archæological Society, and thus having the use of the latter's very valuable library. It is proposed to organise summer excursions to visit manufacturers' works, buildings in progress, and buildings of architectural interest in and about the neighbourhood.

New Government Offices.

Mr. Wedgwood Benn has introduced a Government Bill to make provision for the acquisition of a site for public offices in Westminster, for the acquisition of land for the further extension of the Patent Office and for purposes in connection with the Record Office, to amend the Public Offices, Sites (Extension) Act, 1908, and to make provision for certain other public purposes.

Housing of the London University: Munificent Gifts.

A friend of London University, who desires to remain anonymous for the present, has offered to Lord Haldane, the Chairman of the Royal Commission on University Education in London, a contribution of £100,000 towards the acquisition of the vacant site on the Duke of Bedford's estate north of the British Museum. Lord Haldane is the Government representative on the body of trustees appointed for the purposes of the scheme, and the other trustees are Lord Milner, who represents the Royal Commission, Lord Rosebery (the Chancellor and representative of London University), and Sir Francis Trippel. The donor, who has already done a great deal for University education, states that he considers the site the most central and suitable one for the contemplated erection of new headquarters, and holds that the University of London ought to be the chief educational institution of the Empire. A plan of the British Museum site, with particulars of the scheme, appeared in the Journal for 24th February, reprinted from the *Times* of 19th February.

Lord Haldane has received the following resolution from the Drapers' Company:—"That the Drapers' Company offer to erect a Senate House and Administrative Offices, to form a distinct portion of the new buildings for the University of London proposed in the report of the Royal

Commission dated the 15th December 1911, at an approximate cost of sixty thousand pounds (£60,000), provided that a suitable site is acquired and the other buildings referred to by the Royal Commission as necessary for the University headquarters are otherwise provided for within a reasonable time, and upon condition that the site as well as the plans and cost of the building are approved by the Company."

Smoke Abatement Conference.

Conferences of delegates of municipal authorities and other bodies are to be held at the Royal Agricultural Hall on the 26th, 27th, and 28th inst. in connection with the International Smoke Abatement Exhibition. Sir William Ramsay, F.R.S. (President, British Association), Sir William Richmond, R.A., and Lord Justice Fletcher Moulton will be the respective chairmen. The conferences are divided into three sections, to consider:—(*a*) Smoke pollution and its effects; (*b*) Smoke abatement; and (*c*) Law and Legislation. Among the papers to be considered are those on "The Action of Coal Smoke on Building Stones and Mural Paintings" (Sir Arthur Church, F.R.S.); "The Effects of Town Air on Metalwork" (Dr. S. Rideal); "The Economic Aspect of Smoke Abatement" (Dr. R. Lessing); "Influence of Smoke on Pigments" (Mr. Noel Heaton); "Sunshine Records" (Mr. R. G. K. Lempfert, Superintendent Forecast Division of the Meteorological Office); "Kew Gardens and Smoke" (Mr. W. J. Bean, Assistant Curator, Kew Gardens); "Should the Domestic Smoke Nuisance be any Longer Tolerated?" (Bailie W. Smith, Glasgow); "Progress of the Smoke Abatement Movement in Germany" (Herr Ingenieur Nies); "The Smoke Problem in the United States of America" (Mr. Z. A. Willard, Boston); "Stoking" (Commander W. F. Caborne, C.B., R.N.R.); "Smoke Abatement Laws in Other Countries" (Mr. Julian Corbett); "Is Further Legislation Necessary?" (Mr. Joseph Hurst, barrister-at-law); "The Proposed Smoke Abatement Bill" (Principal J. W. Graham); and "A Plea for the Appointment of a Royal Commission" (Dr. H. A. Des Vœux, treasurer, Coal Smoke Abatement Society). Special lectures are also being organised on the different phases of the smoke abatement movement.

Garden Cities and Town Planning Association.

A course of lectures on Town Planning will be started at the offices of the Garden Cities and Town Planning Association, 3 Gray's Inn Place, W.C., on the 12th April next, and continue each Friday until Whitsuntide. The first lecture will be given by Mr. Raymond Unwin [*F.*], and other well-known authorities will deal with Town Planning under the heads of Municipal, Estate Development, Housing and Sociological, whilst a general review of examples of Town Planning will conclude the present series. The lectures will be open to all who are interested in the subject, and opportunities for questions and discussion will be afforded. Tickets for the course may be obtained from the Secretary of the Association, Mr. Ewart G. Culpin.—The Association has just issued a new pamphlet by Mr. George L. Pepler, F.S.I., entitled "What Town Planning Means," which presents the most valuable features of the Act and indicates the way in which its opportunities may be taken advantage of. Copies may be obtained from the Association at the price of 1*d.*

Preservation of Ancient Monuments.

Mr. Thackeray Turner [*F.*], at a recent sitting of the Royal Commission on the Ancient Monuments of Wales, said that when people wanted a building restored they raised a fund and got a contractor to do the work. Instead of that, he suggested there should be on the spot an architect who understood the history of the building. A contractor often in his ignorance destroyed the most valuable thing. When monuments came under the control of the Government we should get a school of skilled repairers to work under the direction of the architect.

M. Homolle's Return to the French School at Athens.

M. Homolle [*Hon. Corr. M.*], who retired from the Directorship of the French National Museums a few months ago, has been nominated by President Fallières to the post of Director of the French School at Athens in place of M. Holleaux, resigned. This position was filled with rare distinction by M. Homolle some years ago, and is one for which he is doubly qualified as archæologist and Hellenist. M. Homolle was the head and spirit of those excavations of the French at Delphi, which in our time have had no equal. The work involved the entire removal of the village of four hundred houses which in the course of centuries had grown up over the ruins of the ancient Delphi. The magnitude of the operations may be gauged from the fact that four hundred labourers were employed in the excavations, the work lasting six or seven years, and costing altogether some £40,000. Out of the wonderful mass of remains brought to light M. Homolle succeeded in reconstituting in all its original splendour that exquisite monument the Treasury of Cnidos, with friezes, pediment, acroteria, and caryatides, cleverly restored under his direction by the sculptor M. Louis Convers. The story of the excavations and its sequel were told by the distinguished explorer himself in a Paper, "Le Trésor de Cnide et les Monuments de l'Art Ionien à Delphes," read before the Royal Institute in November 1903 [JOURNAL, 21 November 1903]. The subject was illustrated by a magnificent series of drawings, lent for the occasion by the French Government, the work of M. Tournaire, *Grand Prix de Rome* 1888.* The many precious objects unearthed during the excavations—the statues, bas-

* See description by Mr. R. Phené Spiers, F.S.A. [*F.*], JOURNAL, 21 November 1903, p. 43.

reliefs, bronzes, terracotta ornaments, inscriptions, and fragments of architecture—together with the restored Treasury itself, are housed in a museum which, by M. Homolle's exertions and by the liberality of M. and Mme. Syagros, has been erected on the site of the ruins. M. Homolle's return to the field of his former fruitful labours is a matter of interest not only to his own countrymen, but to students of Greek archæology the world over, and he will have the heartiest good wishes of all in resuming the work in which he has already achieved such signal distinction.

Architects in the Royal Navy Volunteer Reserve.

Mr. SYDNEY H. H. IXER [*A.*], of 48 Lessar Avenue, Clapham Common, S.W., writes :—"I note with much satisfaction the reference to H.M. Auxiliary Forces in the JOURNAL for 27th January. For the information of those who may be attracted by the Naval branch, may I ask you to be so good as to insert the appended note on the Royal Naval Volunteer Reserve? I shall be most happy to meet any members at our Headquarters if they will communicate with me."

It is not always that foot-soldiering appeals to the man who wishes to serve his country, and there are many who would gladly accept service of a voluntary nature were the work entailed more congenial to them. The Yeomanry claims some of those who find no attraction in the "gravel-crushing" of the Territorial soldier; but it is often the case that those who do not care for infantry work are also unwilling or unprepared to ride a-horseback, generally, perhaps, from want of horsemanship. For these reasons the services of many men are continually lost to the country. On the other hand, obeying perhaps a more national instinct than soldiering, many men find a useful channel for their patriotism in training themselves for sea service. Many architects, unmoved by the appeals of Territorials or Yeomanry, have found good work to do, and good fun to be got, in the ranks of the Royal Naval Volunteer Reserve, a little-heard-of body of men who have been at work now for more than eight years, and who have earned golden opinions from the Royal Navy for their sound training and real value as an auxiliary to the first line. The R.N.V.R. is one of the few corps in the country in which numbers are kept within nodding distance of the established strength; but, as always, there are a few vacancies. Particulars will be sent at once on application to the Headquarters of the London Division, Commercial Road, Lambeth, S.E., and a personal visit is always welcomed. It should be remembered that service is purely voluntary; there is no subscription nor compulsory annual training. Sailing, gun-drill, signalling, seamanship, are some of the subjects taught, and there is every facility for training with the Fleet throughout the summer for periods of fourteen days; and several cruises have extended to Norway, Gibraltar, and Canada.

SUGGESTIONS FOR A WELL-PLANNED HOUSE.

In a Paper on "The Modern House" read by Mr. Percival M. Fraser [*A.*] before the Institute of Sanitary Engineers, on the 11th March, a casual remark on the apathy of the public in regard to architecture was seized hold of and taken as the text for an amusing article in the *Evening News*, which has since appeared in some of the building papers. From the point of view of journalistic enterprise the *Evening News* might have done worse than reprint the Paper itself in serial form, for, although addressed to a professional body, it was of an eminently popular character, in so far as it calls attention to most of the essentials that go to make up that complicated unit "the English home." Mr. Fraser has favoured us with a copy of the Paper, and we give a few extracts which may be usefully noted by house-designers:

With regard to the public view of modern houses, I am fortunate in being able to give you a summary of opinions, which may be fairly taken as voicing the general feeling on, and emphasising the striking details of, house planning. A number of distinguished men and women were asked the following questions :—

(1) What has struck you as the worst point about the average house?

(2) What is the greatest improvement you have met with in building or in the fittings?

Among those who contributed replies were Thomas Hardy, Sir Edward Poynter, Arnold Bennett, H. G. Wells, Sir Arthur Pinero, J. K. Jerome, Hall Caine, Mrs. Despard, Israel Zangwill, Hiram Maxim, W. W. Jacobs, and others.

The opinions put forward in answer to these two questions may be summarised respectively as follows :—

(1) *Worst Points.*—The large hall for a small house, being unsuited to English requirements. The open heating arrangement, which makes portions of all rooms uninhabitable. Ventilation primitive. Sliding sashes (these should be superseded by casements with transomes and top lights). Basements, a great evil. Cupboard accommodation always inadequate. Windows too small and used without discrimination. Smells permeating the house from the kitchen. The continual labour entailed by stone steps and polished metal fittings. No proper accommodation in rooms for furniture.

(2) *Improvements.*—The arrangements of a bath and lavatory basin directly available from each bedroom. The discriminate use of folding doors. The employment of double walls, affording even temperature. The centralisation of the heating system. Methods employed to conserve waste water for garden purposes. The great development in thin, light, cheap and sound-proof partitioning. The designing of details to avoid lodgment of dust.

Summing up the acknowledged essentials of the well-planned house Mr. Fraser says :

Some of these may be considered idealistic, but none are impossible of being put into effect. In the majority of cases, of course, one factor has to be sacrificed for another, such, for instance, as aspect for prospect, and vice versa, which can rarely be both ideal in one building; but a reasonable compromise can always be effected, and an architect engaged in house building should have a genius for compromise.

It has been said that "The ideal house should be

weather-, damp-, and vermin-proof, and at once substantial, comfortable, noiseless, convenient, healthy, homelike, economical in cost and service, beautiful, and as pleasing to live in as to look upon." It should not be, as is too often the case, merely an ingenious mosaic of rooms, lacking altogether a comprehensive and convenient arrangement, and a *motif* should be clearly apparent in every scheme.

Quaintness or picturesque effects should not be striven after for their own sakes. Ingle-nooks in which nobody can sit are abominations which obtain very freely at the present time. The essential articles of furniture, such as wardrobes and kitchen dressers, should form part of the house design.

Windows should be designed primarily to obtain the maximum amount of sunshine and light and fresh air. They also have to accommodate curtains, a fact often forgotten. The bedrooms should have a window facing east. The bathrooms should face east, also the kitchen offices. Larders should face north, and be ventilated, for the common arrangement of fixed windows and ventilation only by means of a door opening into the scullery or kitchen is a very bad one. The kitchen range should be placed across the light, with the door opening away from the light. All skirtings should be filled in solid behind, and in the kitchen offices these should be of cement. Kitchen, scullery, and larder floors should be solid.

Nine-inch brick walls are quite inadequate in this country, except when built of sound bricks in cement and plastered with cement plaster on the outside or tiled. The best arrangement is to construct walls in two thicknesses with an air-space between, but the greatest care is required in constructing these walls, or the remedy may be worse than the evil.

The foundations should be deep, and the ground floor should be at least 12 inches above the general level, and thorough means of ventilation provided under the ground floors. The truly warm, comfortable house, however, will have solid ground floors with an extra thickness of concrete beneath.

The sanitary fittings should be self-cleansing, and from makers of repute. Baths, sinks, and sanitary fittings of all kinds should be absolutely un-enclosed. The ideal house will of necessity have been built subsequent to the framing of the Model By-laws about 30 or 40 years ago.

Rain-water should be collected and freely used. All water pipes should be protected from freezing, which is a simple and inexpensive process. The loss to the country every winter through burst pipes and consequent damage and expenses must run into many thousands of pounds. The water storage arrangements should be accessible, protected from dirt, and well ventilated.

The house should be so placed on site that it will have sunlight on each wall at some time of the day, and the house should be sheltered from prevailing winds. Subsoils may vary considerably, but it is difficult to imagine a truly healthy house built on a clay soil or on made-ground.

The heating arrangements, if means will possibly permit, should consist of the open fire, than which there is no more healthy arrangement, assisted by hot-water radiators. Each room should be as large as possible as to its floor space, and, generally speaking, it is a safe expedient to sacrifice height for floor space. At the same time, no room should be less than 8 feet 6 inches in height. Chimneys do not smoke if the flues have been constructed with ordinary common-sense. Too often bedrooms contain no places for bedsteads. There should be under no circumstances living rooms or offices in the basement.

The house should not have to rely on curtains or hangings of a like nature to overcome draughts. Such hangings ought to be unnecessary, and they are at all times unhealthy. Means of thorough cross-ventilation should be available when required. The kitchen offices should have hard impervious paving, linoleum with glazed surface or the modern patent "stonewood" paving being the nearest approach to the ideal in this respect.

The dining-room should be constructed to accommodate a specific number of diners, and the whole of the planning and equipment of the room should be for the specific purpose of dining. The serving hatch should not communicate directly between the dining-room and the kitchen.

House refuse should not be stored in a fixed receptacle or in the neighbourhood of the larder, which, however, is the case nine times out of ten. The water supply in the house should be designed on sound principles to ensure thorough circulation. Linen cupboards should be, and can be, conveniently heated. All water pipes should be readily accessible and not cased in. Means of controlling the supply and emptying the cistern should be provided in conspicuous places. Drinking water should be taken from the main, and a draw-off tap from the main provided upstairs to obviate the bath tap being used for this purpose. The kitchen boiler should be fitted with a safety valve, and water cistern should be of galvanised iron. Filters should not be used to purify the water. If there is any doubt that the water is pure, have it analysed.

Whenever possible, open-air life should be encouraged by means of a protected verandah and an outdoor sleeping apartment on the first floor.

The scheme of decoration should be conceived as a whole, and glaring contrasts should be avoided. Plenty of cupboards should be provided. The staircase should permit of furniture being taken upstairs.

No mention has been made of the various points of planning and construction insisted upon by building by-laws. It is needless to say here that these requirements make for the public welfare, and are, with very few exceptions, excellent. These requirements consist in the main of the protection of a house from ground air, the ordering of the whole of the sanitary arrangements to prevent the invasion of sewer gases, and the general requirements as to light and air, and the strength of the construction.

At the same time, hard-and-fast building by-laws must always be a source of obstruction in certain cases. The use of new materials which do not happen to be covered by the by-laws is often objected to, and restrictions, owing to local circumstances, often tend unnecessarily to raise the cost of construction, such as, for instance, the unnecessary width of roads, causing cramped gardens and long rows of terraced houses.

Discussing materials of construction, Mr. Fraser says:

The great modern defect of house-building is the use of a heterogeneous mixture of materials brought from great distances at considerable cost merely to obtain outward effect. There is no doubt that the hidden charm of most old buildings lies in their fitness and right to be where they are. When one meets with a house costing, say, from £800 to £1,000, it is obvious that no money should have been wasted in extravagances. It therefore jars unpleasantly on the senses to find a red-brick plinth with a cement skirting, a stone cap to the plinth, rough-cast walls with stone dressings, the front gable half-timbered, the side gable tiled and the back gable filled in with elmboards, window-sills of Austrian oak, the beam across the bay window a rolled steel joist covered in plaster, pitch-pine balusters, mahogany handrail, European pine for

the ceiling rafters, Persian tiles for the fire-place, French enamel on the joinery, a Yankee stove in the hall, and the roof covered with stone slabs, and so forth, *ad nauseam*. This is no exaggeration; it may be met with in a more or less marked degree in the majority of small modern houses.

ALLIED SOCIETIES.

The Glasgow Institute of Architects.

The Annual Report of the Council of this Institute states that fourteen new Fellows, sixteen new Associate Members, and three new Student Members have been admitted during the year. The membership now stands at 113 Fellows, 76 Associates, 32 Lay, and 22 Student Members, giving a total of 243. The ninth triennial competition for the Alexander Thomson Memorial Studentship was held in February, the subject being a design for a bridge with approaches. The number of competitors was disappointing, only three sets of drawings being received. The studentship, value £60, was awarded to Mr. James Bennett, Ayr; but in view of the small number of competitors, and the fact that the quality of the work was not up to the standard which the Trustees desired, they decided not to award the second prize in this competition. A series of conferences have been held between the Institute Committee and the Joint Committee of the Glasgow School of Architecture on the subject of the proposed course of architectural training in the Glasgow School of Architecture leading up to the Diploma of that Institution. As the result, a scheme was framed by the Institute Committee covering both office and school work, and combining the advantages of the older apprenticeship training and of the academic teaching formerly wanting, but now so admirably supplied by the School of Architecture. The Committee earnestly commend to the members the desirability of adopting one or other of the forms contained in the scheme indicated when engaging future apprentices. In accordance with the arrangement that the recognition of the Certificate of the Glasgow School of Architecture as qualifying for the examination of the R.I.B.A. should be conditional on the appointment by the Council of a Fellow of the R.I.B.A. to act as Examiner, the President was nominated to act in the room of Mr. James M. Monro, who had held office for four years. During the past year the Council was actively engaged in formulating the scheme for the better regulation of competitions, which has now been adopted by the Institute, and in terms of the new Articles of Association the following resolution was passed by the Council and approved of at a general meeting of Fellows and Associate Members, viz.: "Any Fellow or Associate Member shall be considered to have been guilty of professional misconduct in terms of the Memorandum and Articles of Association of the Institute, and shall be liable to the penalties therein stated, if it be found by the Council either (i.) that he has knowingly submitted, directly or indirectly, a design in any competition which has previously been the subject of a notice by the Council or by the Committee on Public Architecture and Competitions, prohibiting Members of the Institute from taking part in the same; or (ii.) that he has knowingly solicited the promoters for permission to submit a design in a limited competition after the leet has been closed." The Council earnestly invites members loyally to co-operate for the general good by refraining at all times from such competitions, even though at the cost of apparent personal sacrifice, as well as by giving immediate information to the Secretary of any such which may be brought to their notice. The Council found it necessary during the past year to make representations for amendment of the conditions of several competitions which were found to be unsatisfactory. In the case of the Finnart School Competition the negotiations proved abortive, and the Council found it necessary to prohibit Members taking part in it. On the initiative of the Institute similar action was taken by the R.I.B.A. and the Edinburgh Architectural Association. The Council accorded its cordial support to a proposal that an exhibition of the Town Planning Drawings exhibited in London in 1910, and more recently in such centres as Edinburgh and Dublin, should be held in Glasgow. In co-operation with the local branch of the Garden Cities and Town Planning Association, a letter was forwarded to the Town Council asking them to give the proposal their support. A reply was received from the Town Clerk stating that the matter had been remitted to a sub-committee to consider as to inviting the exhibition to Glasgow on an early date. Recognising the importance of the Scottish National Conference on Housing and Town Planning Administration to be held in Glasgow on 19th and 20th March next, the Council has, on the invitation of the Standing Advisory Committee of the Conference, appointed the whole of its Members as delegates on behalf of the Institute. The Council had under consideration the proposal that the extension of the Municipal Buildings should be carried out by the City Engineer's Department, and a letter protesting against this course of action was forwarded to the Corporation. It was noted with satisfaction that the Corporation remitted the proposal back to the Committee for reconsideration.

Royal Architectural Institute of Canada.

A deputation representing this Institute, which includes all provincial architectural associations of Canada, recently waited upon the Premier, the Hon. R. L. Borden, to urge the preparation of plans for the beautification of Ottawa and the improvement of public buildings. Three propositions were put forward: (1) the beautification and replanning of Ottawa as the Capital of the Dominion: (2) the desirability of the execution of public buildings by architects at large, instead of, as now, by the departmental staff; and (3) some assistance towards the education of architectural students. As regards the first proposition, the deputation pointed out the desirability of having the planning and beautifying of the city taken up from a national point of view. To further this it was suggested that an honorary committee should be appointed with the usual powers of a City Planning Commission. The committee should be composed of architects, artists, engineers, and others whose professions specially qualify them to deal with a matter calling for such high artistic and technical skill. The Ottawa Improvement Commission work, which in the past has been confined to parks and drives, should be incorporated in the new committee. The Dominion Government, taking control in Ottawa, would afford a splendid opportunity to show an example to the whole Dominion as to what could be done by the concentrated efforts of experts. Such action would not only make Ottawa a capital worthy of the Dominion, but would give the greatest possible stimulus to other cities to emulate. The requirement was for one clear-cut system of city planning capable of developing. As regards proposition 2, Public Buildings, the deputation pointed out that these, all over Canada, were not as creditable in appearance as those erected by private interests. The remedy was to get new blood, to get away from the departmental staff. The best results would be attained by the engagement of architects practising in the city where the building was to be erected. For (3) Educational Assistance, the deputation pointed out that the students in Canada had not the same facilities as in

the United States and Europe. They urged that the Dominion Government should provide an annual grant to establish, at least, travelling scholarships which would enable students to finish abroad. The Premier expressed his entire sympathy with the objects of the deputation, and promised that their representations should have his careful consideration.

Devon and Exeter Architectural Society.

At the Annual General Meeting of this Society, held on the 9th March, the President, Mr. James Jerman [*F.*], F.R.M.S., delivered an address, from which we extract the following :—

From the widely spread area of our Society's district, it is difficult to bring together, except on very special occasions, a large body of members; much, therefore, must be left to the work of the elected Council. It may, however, be possible in time, and in conjunction with the other Allied Societies, to issue to every member a Journal, or Report, of our Proceedings, say quarterly, in order that even the most distantly placed members may be kept in touch with matters affecting the profession. Probably the Royal Institute may see its way to consider the desirability of promoting the issue of such a publication for circulation between the Allied Societies on some general basis, and adapted to each locality. It may be said that the R.I.B.A. JOURNAL, issued fortnightly during the Session, includes all matters of professional interest. This, however, cannot provide a sufficient vehicle of inter-communication, to enable the now numerous Allied Societies fully to publish their doings and set forth their aspirations.

There is one matter in the Report of more than ordinary interest. I refer to the part taken by some members of our Council, to whom I feel we are much indebted, in acting with the Committee of the Exeter City Council to revise the Building By-Laws. This co-operation on the part of the two bodies materially tended to elucidate many points of importance, and one gratefully acknowledges the courtesy of the Authority, and their responsible officials, for seeking assistance of a technical character from those who have a desire and are in many ways responsible for faithfully complying with the important details of construction, affecting the comfort, and even the lives, of our citizens.

Respecting our membership, although we now include most practitioners in the Western area allotted to our influence, there are several still who should be brought into our ranks, as the important measure of Registration would be manifestly helped by the Allied Societies paving the way to this end. In this connection, and reflecting on one's former experience of occupying the position of your President, I am convinced that the term of office should be extended to at least two years, following the practice of the Royal Institute. The Society would materially benefit, in my humble opinion, were a longer time given to the presiding officer to formulate policies and to become more intimately acquainted with the members and their requirements. Here, again, I feel bound to accentuate the extreme desirability of placing in office one who is qualified to represent the Society on the Council of the Royal Institute, where there is a place reserved, without election, for Presidents of local Societies in turn. During the past year, and on the former occasion when you did me the honour to elect me, it was our turn to be represented on the Council of the Royal Institute, and I am more than ever convinced that the Society loses much through being disqualified in the absence of a Fellow being appointed. With the latter qualification, the longer period of office would extend the opportunity of a seat on the Council of the Royal Institute.

With regard to the subject of Education, I am tempted to say a word or two on the higher and after-culture so important to the uplifting of a learned profession. One deplores the falling off of the acquisition of archæological knowledge and interest amongst younger architects. The great impulse given to the study of our ancient buildings, more especially churches, during the wave of church-restoration in the latter half of the last century acted in the most impelling manner in producing amongst architects many scholarly exponents of mediæval art throughout the country. The decline of this wave of restoration and the revived appreciation for Classic and Renaissance traditions have decreased the flow of study, both amongst architects and the clergy, who have done so much in the past to instil a love for the study of the beautiful buildings under their care. It may be hoped, however, that the newer interest may widen the whole sphere of art and produce even more enthusiastic exponents of historical study of this, our elder art. To advance the training of our younger brethren, much might be done locally, and one would suggest, in addition to classes, lectures, and visits to buildings under trained guides, that the Council, and others acting with them, might draw up a list of buildings suitable for measured drawings and intimate study. There are charming specimens of minor constructions, such as doorways, ceilings, mantelpieces, often available as examples of good work which might be scheduled for attention where it is not possible to select complete buildings of any period. Photographs and descriptions could be prepared to enable the student to proceed without waste of time. In our own immediate neighbourhood of Exeter, there is a wealth of good examples of almost every period and style.

MINUTES. X.

At the Tenth General Meeting (Ordinary) of the Session 1911–12, held Monday, 18th March 1912, at 8 p.m.—Present: Mr. Reginald Blomfield, A.R.A., *Vice-President,* in the Chair; 32 Fellows (including 7 members of the Council), 52 Associates (including 1 member of the Council), 21 Licentiates, and numerous visitors—the Minutes of the Special and Business Meetings held Monday, 4th March, being published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease at the age of ninety of John Samuel Phené, LL.D., F.S.A., F.G.S., *Fellow* elected 1872, and it was resolved that the regrets of the Institute for the loss it had sustained by the death of its distinguished member be entered on the Minutes, and that a vote of condolence be passed to his relatives.

The following members and Licentiates attending for the first time since their election were formally admitted by the Chairman—viz. Robert F. Bargman, G. Wyville Home, F. J. Lenton, H. Ray Martin, Harry S. Stewart, *Associates*; H. T. Candler, F. C. Higgins, Victor Hodgson, Arthur Arnold Sebley, *Licentiates.*

A Paper on THE ARCHITECTURE OF THE FRENCH RENAISSANCE, by Mr. W. H. Ward, M.A. Cantab. [*A.*], having been read by the author and illustrated by a numerous series of lantern slides, a discussion ensued, and a vote of thanks was passed to the author by acclamation.

The proceedings then closed, and the Meeting separated at 10.10 p.m.

Architectural Library

FIG. 1.—KAISER FRIEDRICH MUSEUM, BERLIN.

ART MUSEUMS AND PICTURE GALLERIES.

By EDWIN T. HALL [*F.*].

Read before the Royal Institute of British Architects, and illustrated by 62 lantern slides, Monday, 1st April 1912.

IN accepting the invitation of the Council to address you on the subject of Museums and Picture Galleries, I was very sensible of the magnitude of my task, rendered so difficult by the fact that there is no subject on which there are so many divergent opinions, and as to which there so many points of view. There are many architects whose view appears to be that to design a museum and picture gallery means only that they are to make an architectural edifice, imposing from the exterior, containing palatial staircases and halls, which halls will somehow or other adapt themselves to the display of architectural antiquities, sculpture, pictures, keramics, jewels, and other objects of art, and many of you will call to mind exceedingly beautiful designs, which, on analysis, turn out to be, so far as their purpose is concerned, merely vast pantechnicons, glorified indeed, but unsuitable and impracticable in every way. At the other pole are eminent directors of museums who hold that architecture in the building is of little consideration; that so long as the contents are exhibited to the best advantage the building may take care of itself. Thus Professor Furtwängler, in an address to the Royal Bavarian Academy in 1899, says: "The palace type of museum must be abandoned, the main principle must be that museum buildings shall be accommodated to the art work, not the art work to the building." He adds: "Most of our museums are magazines set up in ostentatious palaces." Professor Alfred Lichtwark, director of the Kunsthalle, Hamburg, in an address in 1903, condemns "the interior sacrificed to the façade, galleries used as passage ways, and the symmetrical axial arrangements of interior staircases to afford perspective effects." He says: "It should be forbidden to think of façades before the scheme of the ground plan is formed which will assure the best light and greatest amount of wall space."

While we sympathise with the views of directors to whom the exhibits are everything, we as architects believe that a building of the type under consideration can be, as it should be, designed to meet, and meet adequately, the internal requirements, and yet be both internally and externally a noble piece of architecture. Unless this can be done our art has failed, and failed in making a home for the expositions of artists, a failure which is unthinkable.

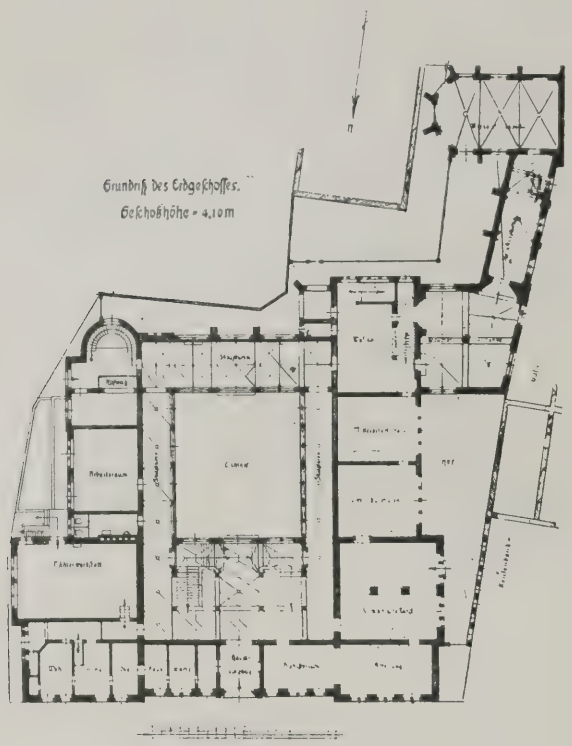


FIG. 2.—MUSEUM, MÜNSTER.

Now we must come to close quarters with our subject, and at the outset a limitation is necessary. The conception of museums in general is too wide for discussion here. Scientific museums and museums of art have very little in common; their spheres of influence are different. The aim of the former is to impart scientific knowledge, to accumulate information for those who wish to put it to practical use; the purpose of a museum of art is to awaken artistic enjoyment, to create lovers of the beautiful. Aristotle says: "The direct aim of art is the pleasure derived from a contemplation of the perfect." "The function of an art museum," says Professor Pritchard, of Boston, "is to collect and exhibit works of art chosen for their æsthetic quality." Scientific museums are an essential part of broad practical training, but their field is so large that they cannot be dealt with to-day. Our range of vision over the art side will be found to be so wide that it will engross all our energies. Professor Gilman, of Boston, U.S.A., in 1904, in dealing with the responsibilities of museums of art, says: "Art is a speech, and the first reason for preserving works of art is that they may speak—express their meaning, and this is the primary end of efficient exhibition." Efficient exhibition, therefore, is of immense importance, and later on I propose to deal with this factor as it affects the architect.

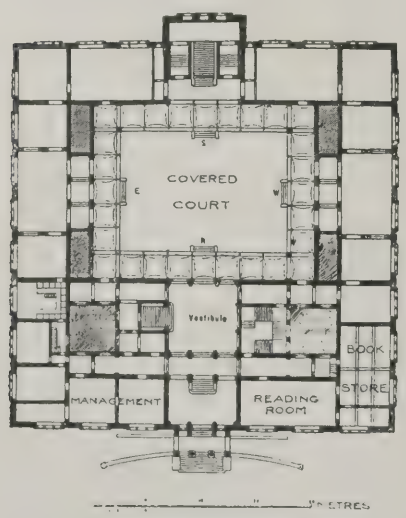


FIG. 3.—KUNST-GEWERBE MUSEUM, BERLIN.

Let us, however, consider the main lines and general principles on which an art museum should be designed.

First of all, its entrances and exits.

It must be borne in mind that there are often priceless works of art in such a building, and as, alas, there are thieves in the world, it is not desirable in normal circumstances to have more than one door (or group of adjacent doors) both for the ingress and egress of people, so that all may be under observation by the same attendants. Fire escape exits in a large building may be necessary, but these should be safeguarded. The common ingress and egress facilitates

the placing of cloak-rooms. A spacious vestibule or hall will, of course, be necessary, and should be consonant with the dignity of the place.

Assuming a large building on more than one floor, the main staircase should be con-

FIG. 4.—THE KUNST-GEWERBE MUSEUM, BERLIN.

veniently near the entrance, so that visitors to departments upstairs may at once be separated from those to the lower departments, thus reducing or disseminating the volume of people. I have seen designs where the main staircase is at the end, opposite to and far distant from the entrance, so that visitors who come especially to visit the upper floor have to pass through the lower, to their own inconvenience and that of those in contemplation of the ground floor exhibits. Of course, there should be other staircases in different parts, both for the public and the staff.

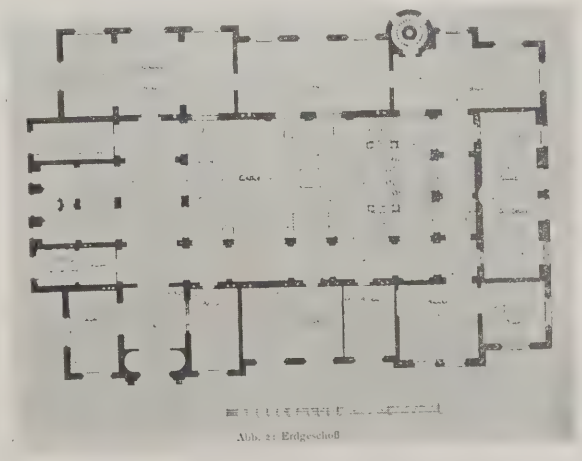


FIG. 5.—MUSEUM, BRUNSWICK: GROUND FLOOR.

In a relatively small building a very usual plan is a rectangle with a central court, the staircase being in the centre or at the entrance, as, for example, at Bremen, Linz, and Aberdeen, and this arrangement is commended by most authorities. At Cologne we get a central court, the stairs being right and left of the hall. In medium-sized buildings, such as at Münster [fig. 2], the Kunst-Gewerbe at Berlin [figs. 3 and 4], and at Brunswick [fig. 5], we have an expansion of the same idea.

The administration offices should, again, be placed in a position convenient for those who

have merely business relations with the museum, so that these may not interfere with the art visitors.

I do not propose to deal in detail with such necessaries as refreshment-rooms &c. They may be placed where convenient for general access, but it must be remembered that the supplies and staff should have access without having to pass through the galleries.

The general disposition of departments now demands attention. Top-lighted galleries may be placed in internal courts with rooms around them, or they may be on the top floor. The latter position is, I think, preferable for many reasons, one of which is that if the central gallery has a roof at the height of the surrounding building this will be quite unsuitable for anything but sculpture or architecture, and if the roof be kept down the shadow from adjacent buildings will be objectionable.

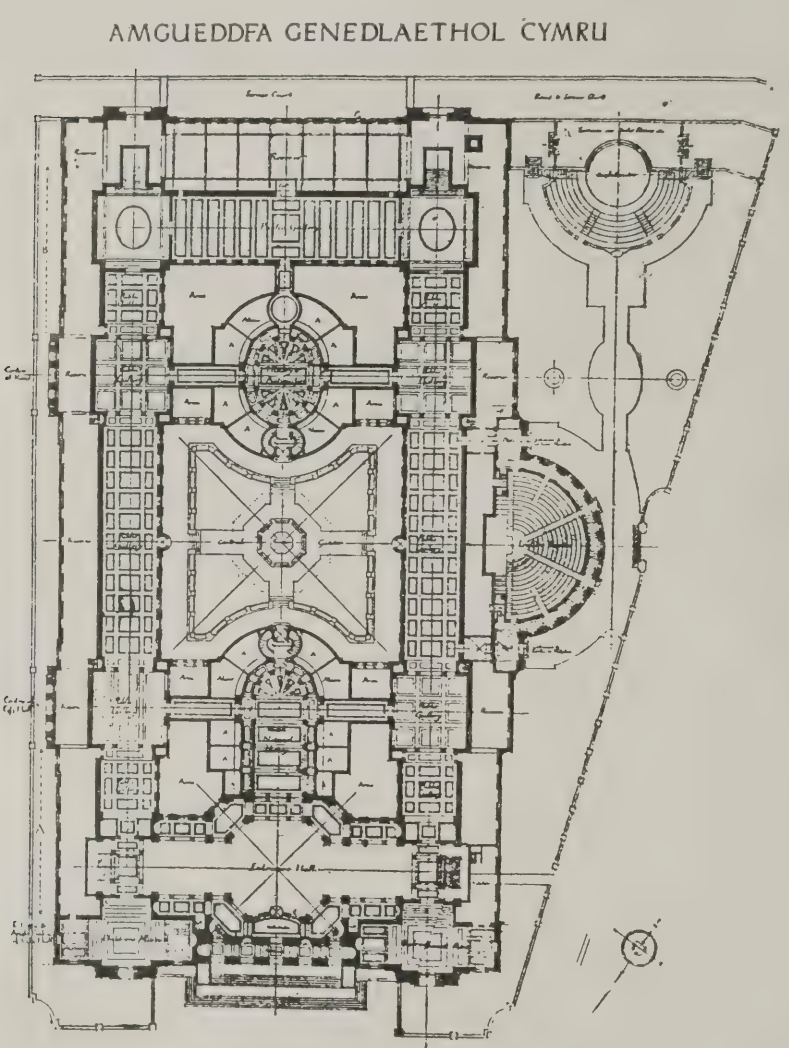


FIG. 6.—WELSH NATIONAL MUSEUM, CARDIFF.

There is a widespread view among directors that there should be internal open courtyards to museums, and Dr. Gustav E. Pazaurek, the director of the museum at Reichenberg, in 1903 said: "The internal courtyards of a museum should be laid out as gardens in which should be sculpture meant for outdoors." You will, of course, call to mind many sculpture gardens in Rome, Florence, and other parts of Italy. These formal art gardens are common all over the world. In India they are a regular and almost universal feature of public buildings, and although many are architectural only, as the Taj Mahal at Agra, others contain sculpture, as the Hosenabad at Lucknow.

In the Welsh National Museum at Cardiff [fig. 6], Messrs. Smith and Brewer have this feature with a central fountain, and below the courtyard is an aquarium. They have also, in the external garden, an open pavilion for the display of national dances, for open-air concerts &c., a feature highly to be commended. It is objected by some that our climate does not suit open courtyards for sculpture, &c., although last summer we had climatic conditions as

favourable as any further south, but if we accept the inferential objection, this could be met by a plain glass roof with open sides, converting the courtyard into a covered garden. I think this courtyard feature is one to be encouraged and developed, and although we cannot have such large spaces as the Italian courts and gardens, or even the Grand Cour du Louvre at Paris, we could frequently have them of areas larger than the octagon court of the Vatican, which is but twenty metres across. In any case, these open courtyards enable excellent light to be obtained for lower galleries and basement rooms. Their prospect from the galleries is restful, and there is also another advantage for galleries surrounding such gardens: the exigencies of the exhibits may require the windows of one room to be varied from those of its neighbour, or may demand, perhaps, a different architectural style for the window. This, in an internal area, can be done, but if the same were desired on the external façade of the building, it would be difficult to do it without damaging the architectural unity of the composition. As an example of this internal treatment I may cite Darmstadt [fig. 7], erected in 1905.

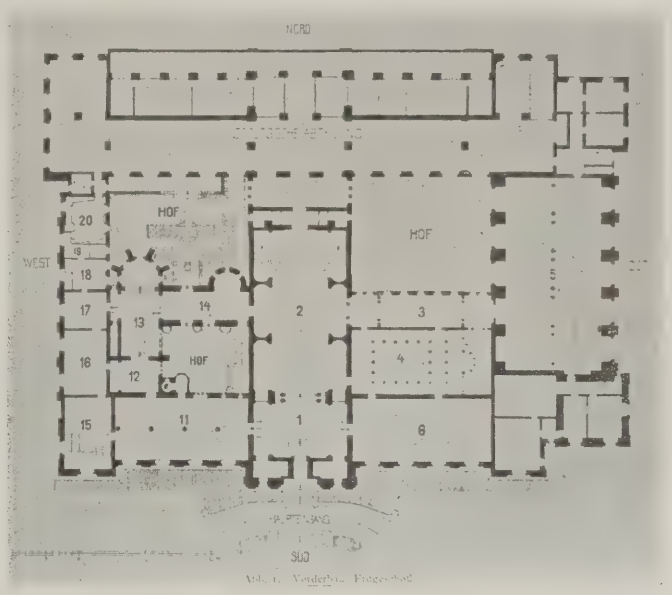


FIG. 7.—DARMSTADT.

This suggestion of sculpture in gardens brings us to the consideration of sculpture galleries themselves. There is considerable difference of opinion as to the best means of displaying sculpture. Some authorities favour large courts or galleries with plain glass roofs all over the area—in fact, the nearest approach to the open air; others say sculpture is best displayed by light coming from windows placed high up near the ceiling, the sculpture being placed near the opposite wall so that light may come diagonally to it. There is much to be said for both views, but the open court view is more on all fours with the covered garden, and should be only for large groups such as Italians would put into their gardens. The latter view is more applicable for cabinet sculpture. If the area be large and the sculpture-groups well placed, the open top light is perhaps best on the whole. A well-known example is the Luxembourg Gallery, 130 feet by 40 feet, which is top-lighted for nearly its whole length. There, no marked light or shade is noticeable, except that in the central parts the vertical light is too great. If the area be small and in the nature of a long gallery there is danger of the shadows from brows, nose, ears, and chin being too much accentuated. All will call to mind the excellent light from high lunettes and windows in the Vatican corridors, and notably in the alcoves of the octagon court

FIG. 8.—THE VATICAN MUSEUM.

of the Belvedere. Professor Clipstone Sturges, of Boston, thinks these are the best lighted of all the Vatican.

In the Braccio Nuovo there are narrow ceiling openings in a coffered vault. No figures are placed in the centre, but the vertical light produces the defects just noted. In the adjacent Chiaramonte gallery the lighting is by high lunettes on one side in alternate bays, and the objects opposite these windows are better lighted than in the Braccio Nuovo. At the Croce Greca there are high lunettes on both sides (east and west). Each piece of sculpture being placed against the wall receives its light from one direction, and the result is good. In the Louvre the galleries, 30 feet wide, have ordinary windows carried up to the vaults, and there the light is excellent. Where this lighting is adopted a white ceiling vault is valuable, as it reflects light. In the cloisters of the Campo Santo at Pisa the lighting on the sculptured figures is excellent.

Dr. Pazaurek says: "The enthusiasm for top light in museums is much diminished of late," but adds, "top light is best for subjects originally intended for the open air," so that he would probably advocate it for a good deal of large sculpture.

Fig. 9.—Villa Albani.

I think one of the finest architectural schemes for the display of sculpture is a wide colonnade (either straight or segmental on plan) at the ends of the central courtyard. A good example is that of the loggia of the Villa Albani at Florence [fig. 9], and such a gallery is more interesting and affords better opportunities for placing sculpture than many more ordinary oblong or square courts.

Another important feature is to form alcoves in the gallery so that statues or groups may be isolated and attention concentrated. The advantage of this is seen in the cabinet of the octagon cortile of the Belvedere, in the loggia of the Villa Albani, and I note that this is a feature of the Welsh National Museum. Of course, in considering sculpture galleries, regard must be had to the ready accessibility for heavy masses to be brought in from outside, and a basement road access is necessary for carts.

While on this subject it is well to consider the question of displaying originals and copies. It is not uncommon to find both in the same gallery, but this arrangement is challenged by experts. Mr. Pritchard, of Boston, says: "Art and the history of art are distinct; history is science, casts are for education, for teaching history or practice. Casts should not be exhibited at all. If casts and originals are exhibited together, the visitor passes both. Originals and casts are not emotionally similar."

Professor Furtwängler, speaking of works of art generally, says that "important works and inferior works must be separated, but the latter may be in near rooms for contrast or comparison." At Dresden, in the Albertinum, sculptured originals are all on one floor, casts on other floors. The same arrangement is adopted in the Berlin Museum. This is a point which has to be settled before an architect can mature a plan for sculpture galleries.

We now come to the general disposition of other galleries in a museum. What is to be the principle on which they are to be laid out? Are galleries for all the different exhibits on a floor to be in one range; that is, to open into one another so that a visitor shall pass through all and make a circular tour back to his starting place? Are galleries to be in groups so that each group shall take one branch of art and illustrate it through all time? Should art work of all kinds of each period or era be illustrated together in the same room or gallery?

For the convenience of administration and supervision only, the one continuous range is better. Large numbers of people are passing in only one direction and do not interfere with those following them. On the other hand, if a visitor wants to contemplate one period of art—be it painting or any other manifestation—he has to make the other rooms mere passage-rooms, and this, further, is disturbing to the art students in those other rooms. Professor Lichtwark condemns galleries used as passage-ways and lays down as fundamental conditions of planning "free movement and quiet." He thinks the ideal is "broad corridors unobstructed, and exhibition galleries disconnected one from another and accessible only from the corridor." A notable example of this is the Uffizi Gallery in Florence [fig. 10], erected 1560-74, whose rooms or groups of rooms are entered from the corridor next the road.

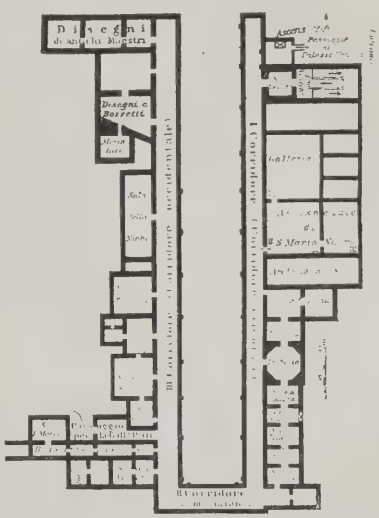


FIG. 10.—UFFIZI GALLERY, FLORENCE.

Mr. Robinson, director of the Boston Museum, discussing in 1904 the plans for their new buildings, says that "at Boston each department has sharply defined limits, with, as far as practicable, an entrance from a main passage so that a visitor in one department shall see nothing else, and not be disturbed by vistas of unrelated objects." Dr. Sturges disapproves of "the interminable galleries of the Louvre." He says—and many will sympathise with him—"it is advantageous to keep the galleries of a great museum so divided into groups as to make it possible for the visitor to take one department at a time and not be forced through an endless circuit as at the National Bavarian Museum at Munich, or let loose in a vast maze as at South Kensington."

In small museums or galleries the question we are considering settles itself. The floor area is limited, and the galleries on any one floor become a manageable unit which, if well arranged, meets with general acceptance, as in the examples of Aberdeen and Linz. Liverpool is on a different plan, but is still of manageable dimensions. It would appear to be possible to apply this small unit principle to a museum of any dimensions, however large. The Kaiser Friedrich Museum at Berlin [figs. 1, 11], erected in 1905, is a combination of the two systems. You may go all round, but it is possible to short-circuit home. The City Museum at Amsterdam and the National Gallery in London [fig. 12] are similarly arranged.

The general principles of the scheme having been considered, we come to the ordinary galleries. As far as I can gather, the general feeling in respect of all except picture galleries is that side-lighted rooms are best. I shall later on deal with side light for pictures, but for the moment we are treating of other exhibits.

It will be readily seen that show-cases having shelves will be better lighted from the side than from the top. In the former case the light passes between the shelves; in the latter one shelf casts a shadow on that beneath. For efficient lighting in our northern clime, cases should not be placed more than, say, twenty to twenty-five feet from a window. Of course, in Italy or the South of Europe, in Australia and India, light penetrates to much greater dis-

tances. Windows in our climate should be kept as close to the ceiling as possible so as to get the highest possible angle of light, and in order to get the valuable reflected or diffused light from the ceiling surface. Show-cases should be placed with the long axis perpendicular to the window. If they are placed parallel a visitor casts a shadow on to the exhibit at which he is looking if his back is to the window, and if he is facing it the glare of the window will be in his face, obscuring the exhibit in the case. Nothing is gained by making these galleries more than, say, twenty feet high. At the Welsh National Museum the ground floor galleries are to be about twenty feet high, and the first floor twenty-one feet. The galleries now being erected at the British Museum are all nineteen feet six inches high on the ground floor.

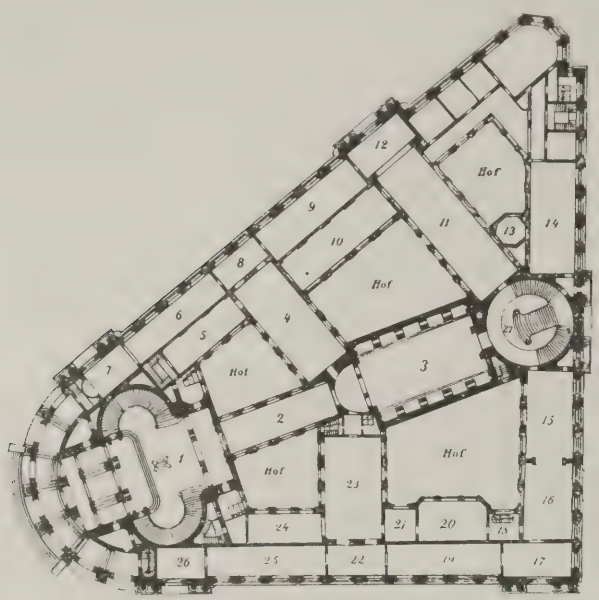


FIG. 11.—KAISER FRIEDRICH MUSEUM.

For the proper display of tapestry and carpets upon the wall, side light is imperative. They are lost and wasted in large galleries lighted by glass all over. The top light casts a shadow from each stitch on to its neighbour, thus darkening the whole colour effect, and when the tapestries are covered with glass the rafters of the roof are reflected in the glass. This is noticeable at South Kensington.

Professor Brücke, in 1878, drew particular attention to this; he pointed out that the "numberless little projections" in tapestry in a top-lighted room were illuminated on their top edges, while the spectator beneath saw the shaded side of each, and lost nearly all the beauty of the colour. He added: "It is the same with oil paintings so lit, where placed above the eye of the spectator." Each dot of paint "has a lighted upper side and a shaded under side," and to the spectator beneath the colours appear more sombre and less vivid. So that in the case of pictures with heavy and dark varnish, and those darkened by time, light from above shows only a mass of black, while in a good side light they still present great richness of colour, and details become visible which had before completely escaped the eye. The superiority of side light is that it permits of placing oneself in a position to see the roughnesses on their lit-up side. Leonardo da Vinci appreciated and explained the advantages of this arrangement in his "Trattato."

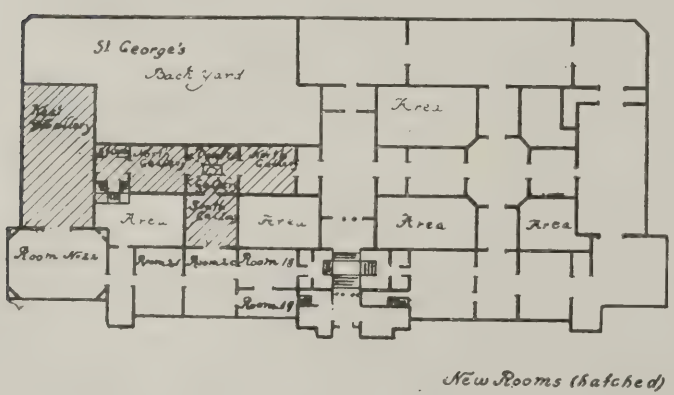


FIG. 12.—THE NATIONAL GALLERY.

The subject of the best light for picture galleries is one on which much has been written. Dr. Pazaurek, of Reichenberg, thinks top light best for modern pictures painted in top-lighted

studios. Not only does he favour side-lighted galleries for Old Masters, but the same view is held by Professor Bather of the British Museum, Dr. Lichtwark of Hamburg, by the Dutch Royal Commission of 1902, and by others whom I have quoted. In this connection the Louvre and the Cluny at Paris, the Musée Plantin at Antwerp, the Pitti at Florence, the Brera at Milan, and others are commended.

I have referred to the Dutch Royal Commission. It will be remembered that Rembrandt's great picture, "The Night Watch," which is fourteen feet three inches by eleven feet nine inches, originally painted for the Scutter's room where there was only a side light, was later removed to the Post of Honour in the new Rijks Museum at Amsterdam, erected in 1885. Indeed, a place at the end of the central nave was specially designed for it. It was to be the culminating glory of the hall. The lighting was from the top, and dissatisfaction with the result led to the appointment of a Commission. They made a number of experiments, tried top lighting not from a central open or flat roof-light, but from a range of sloping lights set parallel to one another, and tried the light from the south-west and north-west. They then tried side light from the same direction, in a room thirty-seven feet nine inches by twenty-six feet five inches, and, with one dissentient, reported that the side light was the best. There were two windows, one nine feet and the other four feet wide, seven feet from one another in the same wall. In the experimental room the cill level was seven feet six inches from the floor and the window openings nine feet three inches high. From the jamb of the nearest window to the wall in which the picture was placed it was four feet eleven inches, and the picture was placed on the floor in the centre of the north-west wall, twenty-six feet five inches long, the height of the room being sixteen feet ten inches. Curtains of tracing linen were placed before both windows when the sun was shining; the ceiling was dyed a dark oak colour and the floor a dark brown. Curtains were used to shield the spectators from the window light. As a result of the Commission's report the picture was finally placed in a side-lighted room.

It will be noted from these experiments that a good height for the window cill of side-lighted rooms is seven feet six inches above the floor, and in Brussels, where the cills were lower, the authorities have fitted shutters to a height of about seven feet from the floor.

Dr. Sturges thinks sunlight (reasonably controlled) a far more becoming light for most, if not all, pictures. At the Brera, at Dresden, and Berlin, the rooms with sunlight showed the painting and brought out the colour best, and other examples cited are the old Italian palaces. On the other hand, it has been pointed out that the high temperature in the rooms is inconvenient, and blinds are a necessity to modify the light on the pictures.

One difficulty with window-lighted rooms is the glare on the opposite wall. In the Bardini Gallery the back wall is not parallel to the window, but at an angle of one in eight, and there the difficulty disappears. In many side-lighted rooms, as, for example, the Hof Museum at Vienna, the City Museum at Amsterdam, the proposed Museum at Haarlem, and other museums, the side walls are not at right angles to the window, but at an angle of about seventy-five degrees converging inwards, and this materially adds to the illumination of the pictures. In some galleries pictures on the side walls which are perpendicular to the window are each set out at a similar angle, but that is not so satisfactory, as each casts its neighbour into shade. I show an example from the Haag Gallery, and I have seen the same arrangement at Verona. It should be noted, however, that no picture can be hung on a side wall close up to the external wall in which is the window, but this space is always utilised for the doorway."

The very general commendation of side-lighted rooms for pictures, and their adoption in most of the large Continental galleries—as well as their existence in the many palaces all over Europe, which, after all, form the most renowned places of exhibition—would lead us

to conclude that such picture-rooms should be provided in every large museum. Mr. A. W. Weissman, architect, of Amsterdam, points out that these should not be on the ground floor because of the reflection from the surrounding ground. However, the top light in some form is so general, and the convenience of being able to get a great amount of wall space for hanging on a limited site is so great, that this system will always commend itself for picture galleries.

The method of lighting these to the best advantage is of prime importance, and on the screen you have sections of galleries at the National Welsh Museum at Cardiff and in the north building at the British Museum, at the Royal Academy, the National Gallery (including the latest rooms), the Grosvenor, the Royal Society of Painters in Water Colours, the Walker Gallery, Liverpool, at South Kensington, the Weston Museum, Sheffield, and the new galleries at Birmingham.

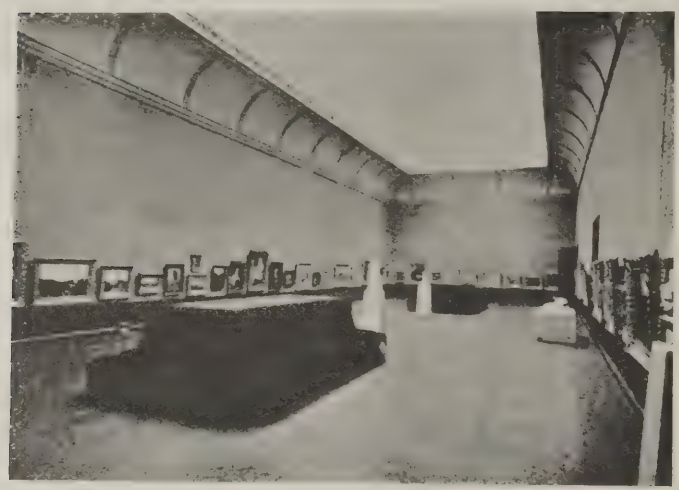


Fig. 13.—City Museum, Amsterdam.

The new galleries at Birmingham, designed by Messrs. Ashley and Newman, are all top lighted. They are generally thirty-two feet wide, and vary considerably in length to suit different schools and collections. They are a valuable addition to the old galleries. They have flat ceiling lights nineteen feet wide, and outer glass sloping roofs above. The architects inform me that the method of lighting was arrived at after prolonged consideration of the opinions of various authorities. I find, however, that the general consensus of opinion is that great areas of light all across the ceiling, even where these are kept well away from the surrounding walls by wide coves, are to be avoided. They unduly illuminate the floor, and the reflection from this and from the glass in the picture causes great trouble. As an illustration I may refer to the oblong rooms [fig. 13] in the City Museum, Amsterdam. Sir Lawrence Alma-Tadema, R.A., speaking in 1907, says, "with top lighting the floor is lighted, but the pictures themselves are not."

Where these great lights exist various expedients to modify their baneful effect have been adopted. At the Art Institute, Chicago, the centre of the ceiling light has been obscured by a horizontal suspended coloured glass screen in ornamental metal framework [fig. 14]. At other places a velarium has been tried, as at the Kunst-Gewerbe, Berlin [fig. 15]. These expedients condemn the design. The centre of the ceiling should be opaque, *i.e.* there should be a plaster ceiling to obstruct direct rays passing to the floor, and only the side portions should transmit the light.

Lantern lights with vertical glazed sides, as in Sir John Soane's Galleries at Dulwich, have been tried, but these are not satisfactory, as the area of the light is not adequate to illuminate the opposite wall.

A great improvement is seen where the flat ceiling of the lantern is reduced in width and the glass sides slope inwards from the bottom. This arrangement exists in some of the rooms of the old part of the National Gallery in London, but the slope was too steep and the area of light had to be supplemented. It is proposed to adopt the principle in the new Welsh National Museum. In the new rooms at the National Gallery the lantern form has not been adopted, the skylights being of the ordinary saddle-back type, and there has been in the newspapers a great deal of adverse criticism of the result.

FIG. 14.—THE ART INSTITUTE, CHICAGO.

Another form giving excellent results in an oblong gallery is a semi-circular or segmental roof with sloping side lights divided by a flat plaster ceiling, or, in a square gallery, a centre skylight similarly divided by a flat ceiling. Mr. E. Stanley Hall has so designed his roofs in the four new rooms added to the Dulwich Gallery [fig. 16], and the American Commission which visited the gallery last year highly commended both arrangements. "The Times," in an article on the gallery in 1910, says: "Sir John Soane's method of lighting is poor and 'niggardly in a climate like ours. . . . The difference between good and bad lighting is seen the moment we enter the new room." I show a section [fig. 16], in which Sir John Soane's lantern is in the centre, and the other forms of skylight are on each side. It will be seen by the dotted lines all drawn at an angle of forty-five degrees that the direct light to the opposite walls illuminates

FIG. 15.—THE KUNST-GEWERBE MUSEUM, BERLIN: GALLERY IN CENTRAL COURT.

an area in the new galleries of more than double that in the old gallery, although the actual area of glass is nearly the same. An outer glass roof and inner ceiling light should be avoided; the double glazing greatly diminishes the light.

In this connection it is opportune to speak of the height of top-lighted galleries. This height may be well determined by drawing a forty-five-degree angle upwards from the base of the picture (say, three feet from the floor), and where it cuts a vertical line parallel to and distant from the opposite wall one-sixth of the width of the gallery, the point of intersection should be the base of the skylight. Thus, in a gallery twenty-four feet wide the base of the roof light should be twenty-three feet above the floor, and four feet within the face of the wall. This four feet should have a coved or sloping ceiling so that no vertical light shall directly descend to the pictures on the near wall. This height works out the same by the system devised by Tiede described by Mr. Weissman in 1907,* and followed at Schienkils Museum at Berlin, but by his system the centre of the ceiling was all glass and the reflection from the floor was bad.

Top-lighted picture galleries in museums should not be more than thirty feet wide. The very few extra large pictures demanding greater distance for observation can be placed at the ends of galleries. Any greater width makes the height too much.

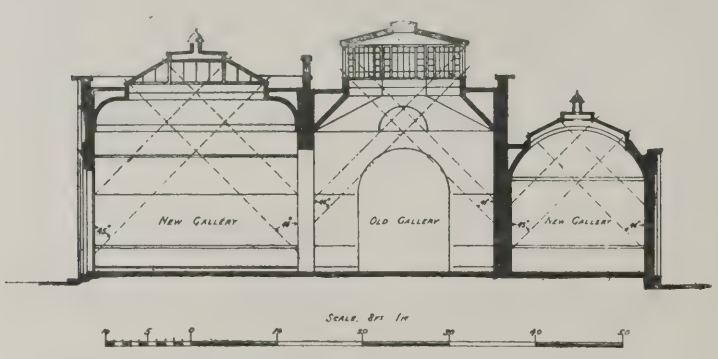


Fig. 16.—Dulwich College Picture Gallery.

The walls are not required to be high. One row of pictures is the best for their proper appreciation, but two rows are admirable where they are not too large, so that a height from the floor of fifteen to eighteen feet is ample. At the new Birmingham galleries fifteen feet six inches has been adopted. You will have noticed in some of the internal views which I have shown much excessive height, the pictures covering but a small proportion of the whole.

Mr. Weissman lays stress on the necessity of limiting the height of sky-lighted galleries. Speaking of the Brunswick Gallery he says: "There, the rooms are too high and most of the light falls on the floor, the top part of the roof having a glass covering. . . ." Speaking again of the Alte Pinakothek at Munich, erected in 1836, he says: "The skylight is not what it should be, as the rooms are too high and the openings too small. The system of lighting is the same as in the old portion of the National Gallery of London, but as the rooms of the latter building are much less elevated and the light openings well proportioned to the floor surface, a far better result is obtained in these." Mr. Weissman thinks the interior arrangement of the National Gallery is one of the best to be seen and the lighting extremely well managed. He thinks some of the rooms are too large and would be improved if divided by screens. Again, the same writer says of the Hof Museum at Vienna: "The designer cared much more for the beauty and completeness of the building than for its fitness for a museum. He made the rooms with skylights much too high."

For the Mappin Art Gallery at Sheffield [fig. 17] a very ingenious gallery had been designed by Mr. Edward M. Gibbs. It consisted of a nave with aisles and a transept. The nave itself was but a passage way, and the aisles were divided between the columns into semi-octagonal bays somewhat like side chapels in a church. The ceiling over the nave was of coffered plaster

* *Gallery Building*, by A. W. Weissman, Journal R.I.B.A., 27th April 1907.

with no light in it, although at the domed intersection there was a skylight. Each aisle bay was separately lighted from an external skylight which extended from the middle of the aisle to a third of the width of the nave, and the bay itself had a ceiling beneath, of which a little more than a half next the nave was of glass. The object was to illuminate the outer wall only from about three feet from the floor up to about thirteen feet, and the other splayed faces to a rather greater extent. By this method the skylight would not have been seen by the spectator of the pictures, and it was claimed that all glitter would have been avoided unless a spectator five feet six inches high were within five feet of the glazed picture. This scheme was modified in execution, and it is interesting to compare the two designs, or rather the first design with the actual gallery. Of the latter I show a section [fig. 18].

Attempts have been made to lay down laws as to the relative area of skylight to floor, but none are of general application, as the light varies in different latitudes, and moreover the light in an English city with its pollution by coal smoke is much less than that in France or Italy.

Rolling blinds are necessary for skylights to adjust the varying intensity of sunlight, and these should be inside. In the new rooms of the National Gallery the blinds are external, and whenever there is a change of intensity in light men have to go on to the roof to alter the blinds. This is very inconvenient, and external blinds get very dirty. The floor of all galleries should be dark, to absorb and not reflect light, and the same remark applies to the dado or base of the wall.

FIG. 17.—MAPPIN ART GALLERY, SHEFFIELD.

As to the colour of walls, there is a great difference of opinion. Nearly all agree that the background for pictures should be dark. At the National Portrait Gallery in London the latest decoration to the second floor range of galleries has been black. This may be good for the pictures, but the conspicuous black remains on the retina of the eye and is oppressive. I think it may be safely said that a background is successful in inverse proportion to its obtrusiveness. At the Royal Museum of Old Paintings at Brussels some backgrounds are of plush, some of velvet, the colours of different rooms being sage-green, Indian-red, and old-gold. In the Musée Moderne of the same city plush and cloth are used of Indian-red colour. In the new rooms of the London National Gallery the colours vary; some are green, some golden bronze, others red. Many artists favour red, but probably the colour scheme of every room in any permanent gallery can only be settled by adapting it to the pictures which are to be hung. One artist of great experience in hanging is of opinion that a bright background suits an Old Master better than it would a modern picture.

As to material, silk tapestry, plush, and velvet are beautiful, and they absorb light, but are too expensive for general use. Lacquered or painted paper and canvas are frequently used, but dyed canvas and plain unvarnished paint are also used. In the Belgian galleries referred to, sometimes as many as two or three different colours are employed above the picture background, but one plain colour appears to be best and most restful.

No picture galleries should be decorated with anything but their pictures. Sculpture-enriched cornices, heavy gilding, and architectural surrounds to panels for pictures are out of place, and distract the eye from the paintings.

Before passing from the subject of picture galleries, a word should be said about those for occasional exhibitions or loan collections, as distinct from the permanent collections of the museum. In large cities at home and abroad there are often separate buildings for these exhibitions, but that is not always possible. At the same time, it is bad as well as a great inconvenience to have to dismantle permanent exhibits for the purpose. At the new Birmingham Galleries the provision of a separate gallery was a stipulation, and so it was for the Manchester building. At Birmingham this has been well placed so that it may be closed without affecting the general scheme. One such gallery may with advantage be provided in every large museum. It should be so placed as not to interfere with other galleries, so that if closed it would be quite cut off from and not affect the rest of the building at all. Temporary exhibitions are very valuable. They are a stimulant to art by means of their novelty. They arouse public interest and whet the appetite.

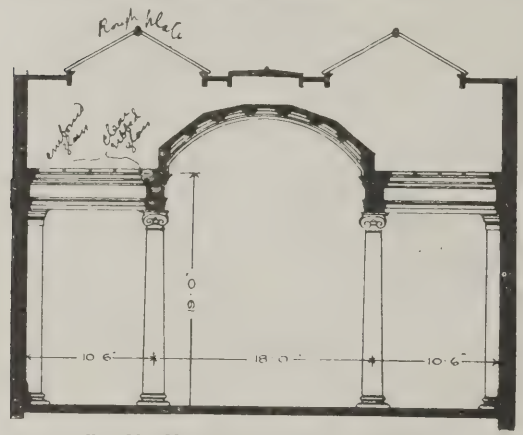


FIG. 18.—MAPPIN ART GALLERY, SHEFFIELD.

A print room or rooms is another requirement for any up-to-date museum, to contain engravings, etchings, original drawings, and such like. Sometimes, as at Cologne, these are arranged in folios on open shelves for ready reference. It may be desirable to place in this department original studies and sketches by masters, although these should not be shown unframed.

The German Directors and Professor Bather of late years have recommended that works of all kinds of art of a period should be located together in a room architecturally reproduced in the same period, so that all may be seen in their natural environment. Dr. Brinckmann, the Director of the Hamburg Museum of Art, says: "The grouping of various art objects together shows how all grew in common out of the soil of a certain temper of mind and a certain hereditary taste," and he arranged a Paris room in this way so as "to display the individual objects in a manner most favourable to their mutual reaction in form and colour." Of this room, Dr. Graul, the Director of the Grasse Museum of Applied Art at Leipsic, writes: "Except where the purely scientific interest compels a store-room arrangement, soon no museum directed by taste and intelligence will permit any other method of exhibition." Dr. Bather commends the National Bavarian Museum at Munich [fig. 19], erected 1894-1900. There the objects are grouped according to periods in the development of Bavarian culture: fifty rooms, each restricted to a period, each built and finished in every detail in perfect fitness for the objects: rooms low or lofty as required. Similar schemes exist at the Plantin-Moretus Museum at Antwerp, in the Monkisches Provincial Museum at Berlin, at Magdeburg, at Reichenberg, and at Cologne, as well as at Hamburg as already noticed, and Professor Folmeritz says the arrangement "quickens the feeling for what is harmonious in the art of the present." Some museums contain churches or chapels designed in the style of the

furniture and fittings therein displayed. For example, the Kaiser Friedrich Museum contains in the centre quite a fair-sized Basilican church in an Italian Renaissance style, in which are placed church furniture of all sorts, sculpture, pictures, altar-pieces, &c., and among others the National Bavarian Museum has a groined chapel to display its Gothic and ecclesiastical work. This historical collective arrangement is not accepted by all authorities, but, even if it be not adopted, the advice of the Manchester Committee, given in their report of 1905, is of value where they say "The introduction into picture galleries of a few pieces of furniture, chests, tapestry, &c., good in style and characteristic of the time to which the pictures belong, is of great value. They take away some of the bareness, coldness, and formality commonly associated with museums."

An important feature of a museum is the reserve galleries. They are not mere warehouses or store-rooms. Some may be so used, and these should be near the goods entrance, but the main purpose, according to modern ideas, is that they shall be accessory to the exhibition galleries, and that from time to time the exhibits proper in the galleries shall be changed so as to keep up public interest. In other words, that the public shall not be regaled only and always with one dish, but that the mental pabulum shall be varied by different courses. For this purpose the reserve galleries should be adjacent to the other galleries to facilitate ready exchange of objects.

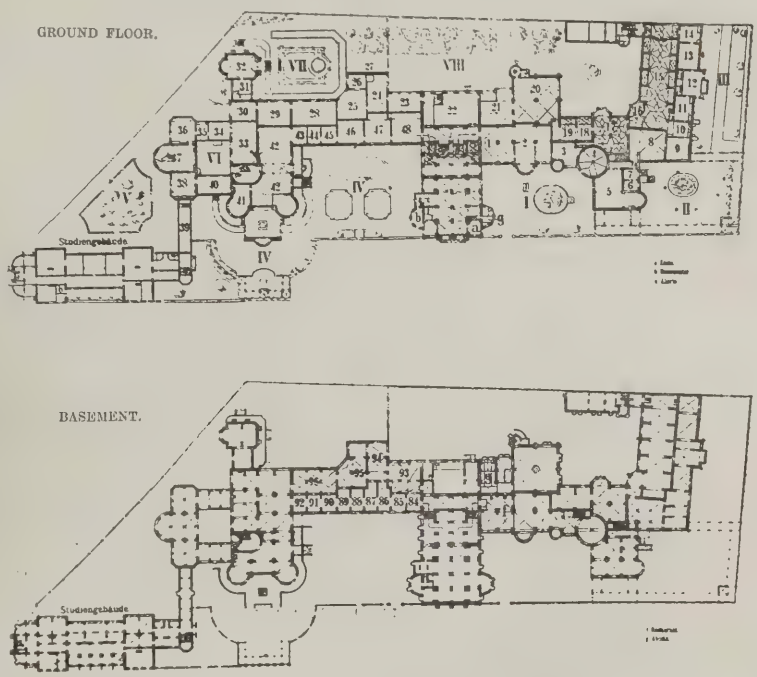


FIG. 19.—BAVARIAN NATIONAL MUSEUM, MUNICH.

There is another advantage in this plan, and that is its elasticity. If it be decided to make small cabinet rooms attached to the main galleries, you have the means of doing so in any department. You can also make recesses into them from the main gallery, as to display, for example, an altar-piece in an appropriate setting. I think the design for the Welsh Museum is admirable in this, as in many other features.

Another matter of interest is that there should be students' research and copying rooms off each department, where students may be quiet. Copying in main galleries is deprecated by some directors as not good for students or for the public. Of course, some students like the publicity, which is advertisement to them, but the serious student of art would prefer the quiet of a private room, and, of course, the copying of sculpture is attended with a lot of dirt and moisture. Each department should have for its Keeper a room, well lighted and quiet, and convenient of access for visitors and students. This gentleman is an important official, an expert responsible for his department, a referee and lecturer, although I have seen designs in which the authors appear to have thought he was a porter.

I have not yet mentioned the children's room as part of a museum equipment. It is, however, a modern adjunct, and should be near the entrance.

Growing interest by residents in a city in the former history of their environment is a most healthy sign, and to encourage this sentiment a department should be set aside to illustrate by sketches, drawings, and models—in some cases actual size—the archæology of the district, the demolished streets and old-world buildings, the former rural scenery &c. of cities which may now be covered by a mass of modern buildings.

Last of all the public rooms is a lecture theatre, and this should be so arranged that, while it is accessible from the museum, it may be separately entered from the outside so that it may be used when the museum is closed. It requires its separate cloak-rooms, lavatories, exits, &c. Its form depends on circumstances. In some cases its use may be restricted to lectures, in which case a semi-circular form is convenient, with tiers of seats. In other cases

Fig. 20.—Bavarian National Museum, Munich.

it may be adapted for other uses as well, as, for example, for photographic or microscopic exhibitions, in which case it is better to make it rectangular with a level floor.

It is hardly necessary to deal with the remaining working departments, and as it is we have travelled over a wide field. I have not dealt with the external design of the building, and in very few cases am I showing exteriors of foreign buildings. My reason for this course is that the standard of architecture varies considerably in different countries, and architects in each will work on the lines of their own country's evolution. It may, however, be said that the repose and quiet which are essential to the interior should be expressed externally, that dignity is all-important, and this connotes simplicity. Sculpture is better if concentrated to emphasise the general mass rather than spread in detached statues all over the building. A sculptured frieze is better in the shade of a colonnade than standing boldly exposed to the inclemency of the weather on a plain wall. As an example of the former, one recalls the Parthenon, where the frieze expresses the mystery of endless life and movement seen through and emphasised by contrast with the rhythmic but rigid lines of columns. A modern exemplification is the frieze in the Grand Palais at Paris.

For side lighting of general subjects, a trabeated is better than an arcuated treatment of windows, because the diffusion of light at the top is more uniform. Large sheets of glass are not better, and are far less architectural, than windows cut up by bars or lead cames, and these do not interfere with the general lighting. This fact may be seen for oneself in scores of galleries, and Professor Sturges lays stress on the fact from his critical inspections.

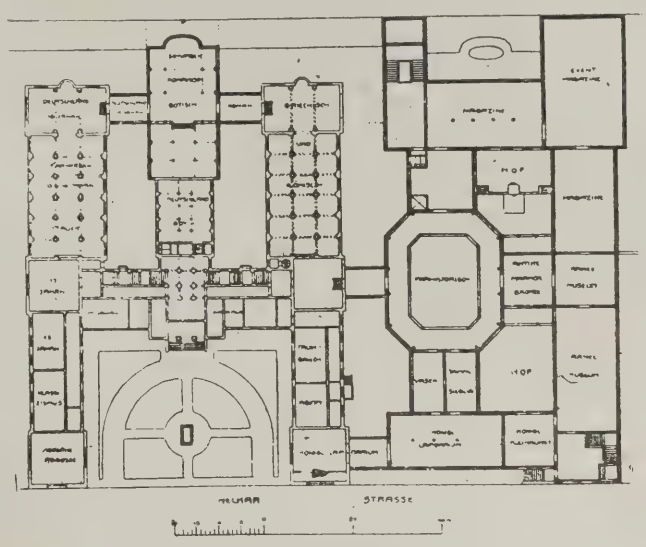


FIG. 21.—THE MUSEUM, STUTTGART.

We have seen many plans of museums, but there are others of interest. The States Museum at Riga is on the long parallelogram plan, having a large central staircase hall, with top-lighted galleries and smaller side rooms with splayed angles on the inner walls. The Provincial Museum at Hanover, erected 1887-1902, is about 273 feet by 203 feet, and is almost identical in the general plan of each of its two main blocks, which are arranged parallel to one another with connecting side galleries, all surrounding a large central court.

The Provincial Museum at Bonn is a different scheme, and does not appear attractive.

The Museum at Stuttgart [figs. 21, 22] has a large quadrangular entrance court, as well as several internal courts, and does not look very convenient, simple, or beautiful.

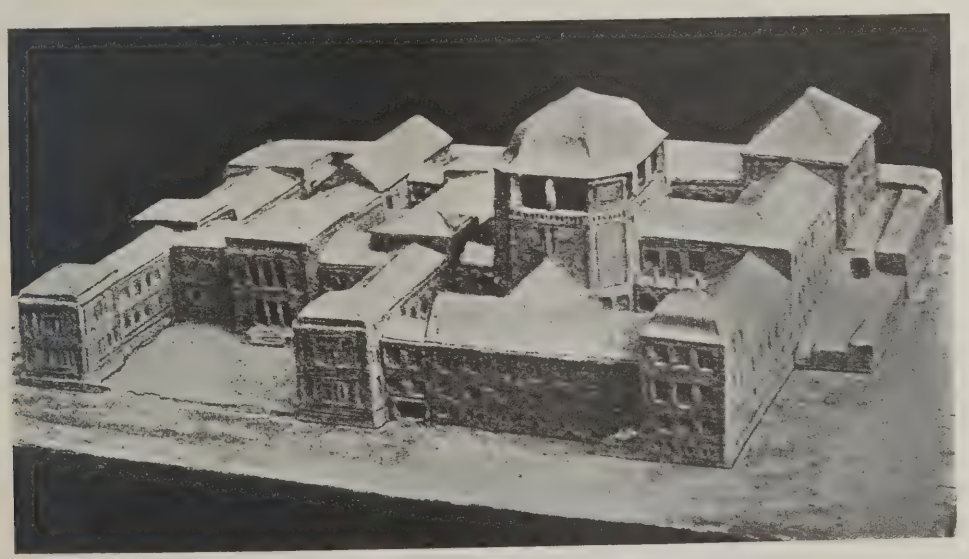


FIG. 22.—THE MUSEUM, STUTTGART.

Glasgow Museum and Art Gallery is 492 feet long by 164 to 278 feet wide: it has a large central nave with aisles, and high transeptal courts with aisles and galleries on both sides and at the ends.

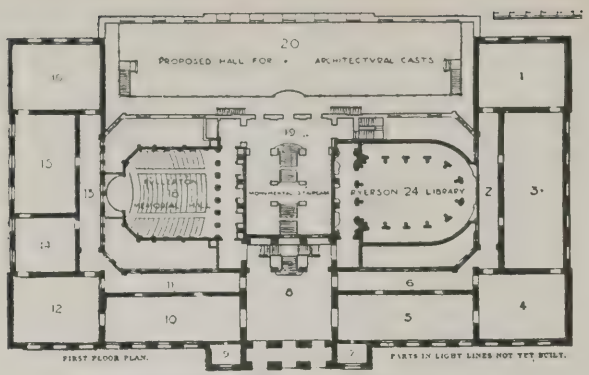


FIG. 23.—ART INSTITUTE, CHICAGO: FIRST FLOOR PLAN.

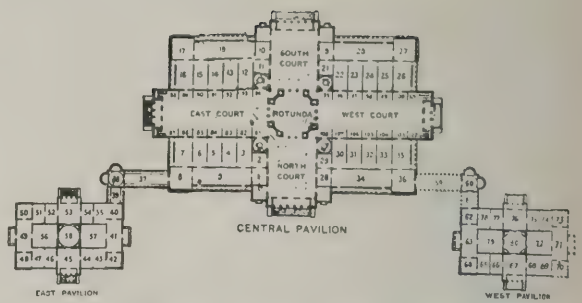


FIG. 24.—FIELD COLUMBIAN MUSEUM, CHICAGO: GROUND FLOOR PLAN.

FIG. 25.—METROPOLITAN MUSEUM OF ART, NEW YORK: MIDDLE HALL.

FIG. 26.—FIELD COLUMBIAN MUSEUM, CHICAGO: SOUTH FRONT.

Edinburgh Museum of Science and Art, erected 1861 to 1888, has a large hall on an axis parallel to the main entrance front, and galleries or courts enclosing this on three sides.

The Art Institute at Chicago [fig. 23], erected in 1893, is 350 feet long by 185 feet to 225 feet wide. It has a large central hall, with a stately staircase in the middle of the block, and to the left and right of this a lecture hall and library respectively. The galleries occupy three of the outer sides of the building, and all are entered from a wide corridor as well as being connected together. Its basement is twelve feet high, ground-floor twenty feet; the first floor, eighteen to twenty-five feet, is lighted by a glass roof with ceiling light below, the centre portion having the suspended stained glass screen already referred to.

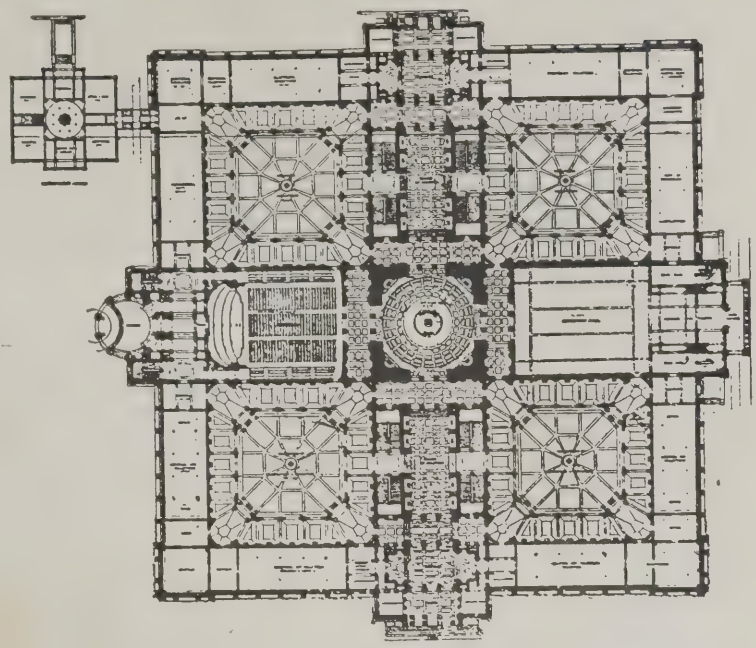


FIG. 27.—BROOKLYN INSTITUTE OF ARTS AND SCIENCES: FIRST FLOOR.

The Field Columbian Museum at Chicago [figs. 24, 26] was the Fine Arts building of the International Exhibition. It consists of a main building containing vast halls in the form of a cross, top-lighted, with a central domed hall, and two rows of rooms opening out of the large halls. The longitudinal nave is 556 feet long, and the cross nave or transept 333 feet long, both 110 feet wide and 77 feet high. From the main building on either side a corridor leads to a subsidiary building forming a projecting wing containing nineteen galleries, the general plan being almost a smaller edition of the main building. Externally the mass is a dignified classical composition.

The Metropolitan Museum of Art at New York [fig. 25], erected in 1877-1892, is 345 feet

FIG. 28.—BROOKLYN INSTITUTE OF ARTS AND SCIENCES: MUSEUM BUILDING.

long by 325 feet wide, and consists of a central hall of the entire width, and six other large halls next the exterior, with connecting galleries on the major axis. The central hall is for architecture, the other ground floor halls contain collections from the Cyprian excavations—vases, terra-cotta, glass, stone sculpture, &c. The top floor contains pictures, keramics, musical instruments, and Cyprian gold ornaments.

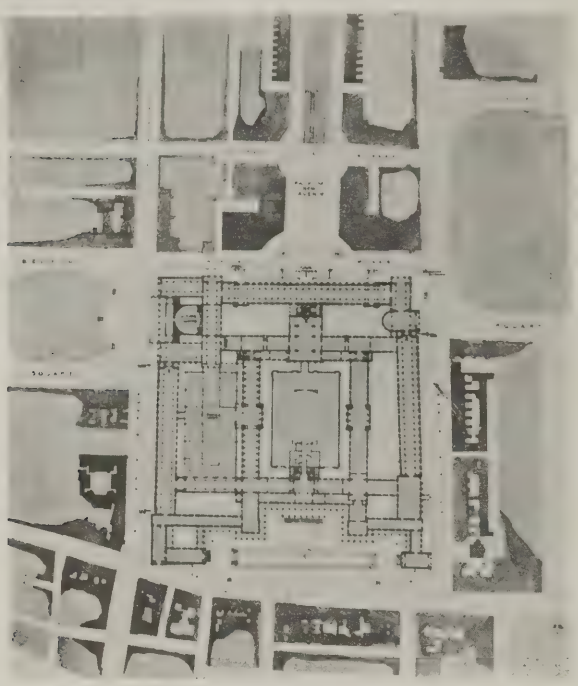


Fig. 29.—British Museum.

At Brooklyn, the Institute of Arts and Sciences was begun in 1895, and, I think, is still in course of erection. When completed it is to be 560 feet square, and will contain four covered courts. Its basement floor is twenty-five feet high, its ground floor twenty-nine, first floor twenty-two, and second floor twenty-four feet high, skylighted. I show the first-floor plan and the exterior [figs. 27 and 28].

The Royal Academy, London, is used for the well-known annual exhibitions of contemporary art, but occasionally it is used for other temporary exhibitions.

The Victoria and Albert Museum in London has been recently completed. It contains several vast galleries of great height, top lighted, surrounded by smaller but spacious side-lighted rooms.

Last of all, we have the British Museum as it is proposed to be when completed. The old part was erected in 1855. The northern block of galleries is approaching completion, and it will be seen that the ultimate extension will reach to Bedford Square on the west and to Montague Street on the east. The well-known Reading Room is in the centre. The new galleries on the ground and first floors will be forty-eight feet wide, lighted from both sides. Those on the top floor are skylighted. They are nineteen feet high to the base of the coves, and thirty feet high to the lowest edge of the glass in skylight. This building when finished will form the noblest architectural monument of the Metropolis, and we hope Dr. Burnet will live to achieve it.

In conclusion, I have to thank all those architects who have so kindly lent me plans and photos of their work to assist in illustrating the important subject we have been considering.

DISCUSSION ON MR. HALL'S PAPER.

Mr. Ernest Newton, A.R.A., *Vice-President*, in the Chair.

Dr. WM. EVANS HOYLE, Director of the Welsh National Museum, who rose at the instance of the Chairman to propose a vote of thanks, said he did so with a very great deal of diffidence. In the first place, Mr. Hall's discourse might be compared to a kind of intellectual pemmican; it was almost impossible to take it in and to form a mental image or conception of what it really contained. In the second place, he had not had the opportunity of reading it through beforehand and reflecting upon it. There were, however, one or two matters to which he might allude. The first of these, which he should like to lay very great stress upon, because it referred not only to museums of art but to all museums, was the absolute necessity of a dichotomous division of museum collections: they must be distinctly separated into the collections intended for the general public and the collections intended for the student and the specialist. The collections for the specialist could not be too extensive. No one studying a subject could have too much material for comparison. But a collection of skulls, for example, such as would satisfy an anatomist would be a weariness to the spirit of the ordinary spectator. Therefore it was necessary to keep the material for the specialist in the reserve galleries, where he could sit at a table at leisure, in a good light, and examine his specimens without being worried by the general public looking over his shoulder, or without his manipulations interfering with the proper view of the specimens by the public. On the other hand, the specimens for the public must be limited in quantity, though each of them must be the best of its kind, selected with a definite object in view, and with a definite idea of what it was there for. That applied equally to artistic productions as to objects for the illustration of scientific facts and principles. Every work of art exhibited ought to have full justice done to it; that is to say, if a picture it should be hung in such a way as to show it off to the best advantage. Pictures ought not to be placed jammed together, like a mosaic, with the view of getting as many as possible on the wall. That was absolutely fatal to the proper realisation of a picture as a work of art. Mr. Hall had very properly dealt with this by mentioning the limits at which pictures were readily visible to the eye. With regard to backgrounds, there was, he thought, no one kind of background which was better than all others. Each must be selected to suit the objects to be placed in contiguity to it. He thought, also, that a variety of backgrounds added very much to the pleasure of going through a museum, just as the sizes and shapes of museum cases should be varied in different departments and different rooms, in order to give a feeling of variety in going from one section of a museum to another. In art collections, the ideal plan would be to have each of the cases designed definitely for the kind of objects it was to contain. There was an excellent example of that in the rooms of the Bavarian National Museum, Munich, where a beautiful glass case had been designed for holding mediæval ecclesiastical metal-work. The mention of the Munich Museum reminded him that the erection and creation of that museum was a wonderful *tour de force*. There was in Munich a large collection to illustrate the artistic history of Bavaria from the very earliest ages to the middle of the nineteenth century, and this building was definitely designed for the purpose of containing this collection. Every room in the building was expressly constructed for the particular class of object it was to contain, beginning with the prehistoric period, then following with the Roman, where the architectural treatment definitely suggested Roman ideas, with niches in the walls like a columbarium. The same idea was carried on through the various periods: a Gothic chapel was erected in one place for an exhibition of altars and altar-pieces, church benches, candlesticks, etc. It was an excellent thing that we should have in Europe, at all events one museum to show what could be done in that way; but it would be absolutely fatal if we were to act on the idea that all museums should be constructed on that principle. It was obvious that a museum like that was a finished museum; it could not grow. When at some future time it was needful to illustrate Bavarian art in the twentieth century a new museum would have to be built and a fresh series started. And if, as was sometimes the case, half the museum had to be built, and twenty years later the other half, we should be in a very difficult position, because all the present materials had to be put into half a building, and when the rest of the building was erected the contents would have to be spread out. Therefore the galleries should be built in such a way that they could be adapted to contain not only twentieth-century objects, but prehistoric exhibits as well. That any gallery should be able to do duty for any other gallery was a more practical ideal. Galleries should be built in long stretches, without special architectural markings which would prevent them from being divided to make rooms of any particular size for any special collection or period. He was glad to hear Mr. Hall speak in commendation of the design of the National Museum of Wales. Personally, he believed that design to be a very

good one indeed. The Council was vain enough to think that it had avoided some of the mistakes of its predecessors; though probably it would be found to have made some of its own when it came to work the museum; but at present it felt that there were some very good points about that museum. One thing he might mention: they had put their administration rooms on the second floor, and, speaking as a Director of a museum, he thought there was a certain importance in this. It was not desirable to have the Director's room too accessible to the public. The question of top-lighting *versus* side-lighting for picture galleries was a very difficult one; as in the case of the backgrounds, there was much to be said on both sides. Mr. Dunbar Smith, Sir Wm. Goscombe John, and himself, had gone over many of the galleries of Europe, looking at every one of them with special regard to this particular question, and—Sir William would correct him if he were wrong—the conclusion they came to was that, speaking generally, for gallery pictures, for most modern works of art, the top light was most satisfactory if it were not too vertical. If it were, one got the effect which Mr. Hall alluded to, of the prominences of the paint being all illuminated above, and casting shadows below. If the light came across, they came to the conclusion that for a large room to contain many pictures, the top light was the best. If the galleries were side lighted, it was very important that the walls should be splayed, and not at right angles to the outer wall where the windows were. The speaker concluded by moving a very hearty vote of thanks to Mr. Hall for his most elaborate and interesting and finely illustrated paper.

Sir WILLIAM GOSCOMBE JOHN, R.A. [*Hon. A.*], in seconding the vote of thanks, said that he could not speak as an expert on the matter, but he might say a word from the point of view of the artist. Speaking from his own experience, the two things which appeared to be so difficult to harmonise were the interests of the dilettante and, what was of far greater importance, the interests of the student. In such huge depositories as the Victoria and Albert Museum we lose our way in a chaos of *objets d'art*, and when we go to look for a particular work for the purposes of study we are in danger of being arrested by all kinds of irrelevant *bric-à-brac* quite foreign to our purpose. Splendid galleries are too often devoted to the exhibition of objects dear only to the wealthy collector, and of small interest to the student of art, and, with little discrimination or selection, all the "goods" appear to be placed in the "shop window." He thought that a museum of such dimensions bewildered the visitor and was far less useful than several much smaller ones. In fact, in these great collections, the student ought almost to be led, with blinkers on, to the object of his studies. Then there was the question of placing objects in their proper surroundings. The very interesting attempt to do this would be recalled in the basilica of the Kaiser Friedrich Museum, Berlin, where altar-pieces, church furniture, etc., were placed. Unfortunately, one could not see the objects well, as the light was insufficient. We all knew of the many fine things that were to be seen in the churches of Italy, but it was often impossible to see them owing to their unfavourable, though characteristic, surroundings. For instance, there were the bronze panels by Donatello, on the altar in the Church of St. Antonio in Padua, which the visitor could only see properly by the aid of a lighted taper and on his hands and knees. One would recall many other fine things in positions most unfavourable for inspection, though decoratively suitable to their surroundings. As to the lighting of sculpture, he thought that, generally speaking, it was best where the light approximated to open-air lighting, or was above the object to be lighted, but under no circumstances should it be below the eye of the spectator. He remembered one notorious instance of bad lighting, viz. at the Museum at Olympia, where the Hermes of Praxiteles was placed. Owing to a series of low-lighted windows, it was impossible to get a good view of the statue. Yet a special room had been built for it and much decoration spread about on the ceiling. Had a simple top-light been placed, or even a high side-light, one could have looked at the statue with comfort and pleasure. As it was, its beauty was sadly interfered with, owing to bad lighting.

Mr. FRANK DICKSEE, R.A. [*Hon. A.*], said he quite agreed with Mr. Hall as to the method of lighting he seemed to recommend. For a picture gallery, there could be no question as to the difference of value between side-lighting and top-lighting. Provided it was scientifically right, top-lighting was beyond question the best way of displaying paintings. It should certainly not be a flat-glass roof, such as was sometimes seen, which illuminated the floor more strongly than the walls; and it was very important that the light on one side should only serve to light the pictures on the opposite wall. The top light should have no effect whatever upon the pictures on the wall of the same side on which the light is, otherwise it raked the painting in a very unpleasant way, and marred the effect of the technique. A very important question was the background on which pictures should be placed. If one colour had to be chosen, a low-toned red might be as good as any; just as, if the framing of pictures were to be limited to one material, no doubt gold was the best. But there were some pictures to which a red-coloured wall would be almost fatal. Therefore he could understand with Dr. Hoyle that it would be a great advantage to have galleries in which the background colour varied. For modern pictures he should think, certainly if they must have one colour, red would be the most desirable, because the tendency of modern work was perhaps towards grey and to be

fresh in colour. Therefore, a certain amount of contrast was wanted, but it should not be too pronounced. His own personal feeling was that an absolute neutral dull colour was a mistake. Colour, as it were, begot colour, and if there were a certain amount of colour in the wall, enough to interest the eye, it started the eye on an exploring expedition in the matter of colour, and it probably produced a better result than if there were a dull, grey, colourless wall which did not stimulate the optic nerve in any way at all. He was inclined to think that architects, when dealing with pictures, concerned themselves too much with their architecture and not enough with the treatment of the pictures they were called upon to serve. A very common fault was to place pictures too high; and therefore he agreed with Mr. Hall that it was a great advantage to have galleries constructed which were not too lofty. He could understand that, from the architect's point of view, he got a more dignified effect if he could design a high building; but from the point of view of the display of the pictures, it was better that the light should come low on the wall, and that the picture should be kept reasonably low. The Institute itself, he found, in dealing with its own pictures in the adjoining gallery, put them undoubtedly too high; and that was the way architects would treat paintings if they were left to their own devices. Therefore, a very careful eye must be kept on them when they designed galleries for pictures.

Mr. WM. WOODWARD [*F.*] said it was very curious that with all our knowledge of what should be done for picture galleries and museums we should go on repeating the blunders which we knew to be blunders. The architect in designing museums and picture galleries seemed to delight in making magnificent architectural buildings without the slightest regard to the uses to which those buildings were to be put. The buildings were too high; they dwarfed the objects, if they were ordinary museum objects; and by their height they prevented that adequate lighting which was so necessary, and which was absolutely the most important part of the designing of such buildings. Another thing in which we fail is that we seem to have no idea of simplicity of plan. Taking any of the various museums in England or abroad one finds generally that the plan is more or less complicated. A man may have the plan with him and attempt to follow it, but unless he is very careful he will come back again to the place from which he started without having seen all the rooms. The plan seemed to be made without any regard to that continuity of the exhibition which should pervade all museums. He was sorry Mr. Hall did not refer to the Tate Gallery. In his opinion that gallery was one of the best-lighted galleries in Europe. The roof was curved, and the centre part was plaster or wood. The lights were sloping, and, as Mr. Dicksee observed, that sloping light well exhibited the pictures on the opposite side of the room. In all the galleries he had visited, including that at the Vatican, he had never seen one so well lighted, or at all events better lighted than the Tate Gallery. The Paper had been most interesting and valuable, and Mr. Hall had given them much food for thought. They had had a most interesting address from Dr. Hoyle, the Director of the Welsh Museum, and they had had lectures from curators of museums; but the curious point was this, that *after* an architect had built his museum the curators and the directors would come to him and point out that practically the whole of his planning was wrong. That had happened very recently in London. He sincerely trusted that when the next museum or picture gallery was to be built they would have those gentlemen who knew what should be done conferring with the architect beforehand, and so preventing the huge and costly blunders which we all so deeply regret.

Mr. H. HEATHCOTE STATHAM [*F.*] said he thought that the corollary of what they had heard about the lighting was this, that the best way of lighting a picture gallery was with a lantern in the centre, with the lights vertical, and the centre part opaque. By this means the floor was kept in comparative shadow, so that it was not reflected in the pictures when they were glazed; the light from each side sent light to the pictures on the opposite side. With reference to the lighting of sculpture, no reference had been made to the sculpture in the Hall of the Palais des Beaux-Arts, Paris. The sculpture there was under almost ideal circumstances; it was almost the same as daylight in the open, only that the spectator was sheltered from the weather. There was a court with a great glass roof over it, and the sculpture was seen under a vertical light, but not concentrated, it did not exaggerate anything. He remembered many years ago going with a party to examine the bas-reliefs on the Albert Memorial when they were in progress; they went into the sculptor's shed, which allowed a slight gap between the roof and the base of the monument, and the sculptor told them to remember that they were seeing this sculpture under a very flattering light. He (Mr. Statham) thought it was too flattering, for it exaggerated all the projections of the sculpture. But the exhibition at the Palais des Beaux-Arts was ideal, because it was almost daylight lighting, and there was plenty of room to see each work all round, which was very important for sculpture. He was looking forward to the time when the Royal Academy might acquire and roof the whole of the courtyard of Burlington House, and put all the sculpture there, instead of crowding it into the rooms.

Mr. A. T. BOLTON [*F.*] said that having visited a large number of foreign as well as English galleries he should like to call attention to the fact that there

was another side to the question. They all seemed agreed that these museums were absolutely wearisome, that they were too large, and that there were too many of them. From that point of view there was this answer, that to a large extent the museums had fallen too much into the hands of the specialist. The newest part of the National Gallery was a very good instance of what he referred to. It might be that no one had a very good word to say for the part added by Professor E. M. Barry about 1870; but if that extension was compared with the newest portion which had lately been opened, surely there was much to be said for Barry's planning, which was on a large and adequate scale. The impression produced on the general public by interiors well planned and of good architectural effect was as much worth consideration as the narrower standpoint of the specialist. The present plan of building small cabinet rooms, which were no doubt admirable from the specialist's point of view, could be seen in the new part of the National Gallery, and the result was open to serious criticism. Take the Louvre: everyone who has visited that building on a Sunday must have been immensely impressed with the great stream of people coming into that magnificent gallery. However defective it might be to show off certain pictures, it was in itself an education. The vast public who come in every Sunday to see this great gallery hung with its pictures must derive very much good from the association of a fine interior like that with the magnificent pictures. It may be true that Klenze's Gallery, the Alte Pinakothek at Munich, was a great deal too high, but it was based, he imagined, on the Louvre Gallery, the idea being the same, a long lofty hall. In this case the hall was too high, and had certainly insufficient lighting area, judging from the section shown on the screen and in Klenze's book. Before the specialist is allowed to run away entirely with these public galleries we should show that there is another point of view, and that these fine buildings should be planned in accordance with a large conception, with adequate rooms, and with a certain dignified architectural effect, and not only from the point of view of expert students of paintings who wished to see the pictures in very minute detail. He did not think half of those present would agree with what Mr. Woodward said about the Tate Gallery. The lighting was far from satisfactory. He doubted if there was any gallery so troubled with reflections as that was. He had seen the new Galleries at Birmingham, and had been much impressed by the fact that they were carried out on the exact reverse of the National Gallery. Instead of the open skylight roof craze which had been followed in the National Gallery they had gone back to the same flat glass inner ceiling to be seen in E. M. Barry's work at the National Gallery in about 1870, and these Birmingham Galleries appeared to him to be very well lighted. The pictures were not in those galleries yet and that of course would be the great test. The ceiling was in large squares, the glass was cast hammered plate, and adequate provision had been made to get between the outer skylight and the inner to clean the glass. That was the usual argument against inside skylights, the trouble of getting rid of the soot and dirt which collected on the glass, but too much importance should not be attached to it. Looking at the National Gallery it was not certain that a mistake had not been made. The Birmingham Gallery had very much impressed him, and if the pictures were satisfactory, as it was possible they would be, he thought the subject would have to be reconsidered both as a matter of plan and section.

Mr. MATT. GARBUTT [*F.*] said that this was not the first paper on the subject they had had at the Institute, and every time the question of lighting had been discussed at some length. But one point had never, so far as he remembered, been mentioned. There might be very good light in a room, and yet one might still be unable to see some of the pictures. In the case of old paintings which had become very dark with age and which had to be glazed to preserve them, it was frequently impossible in our galleries to get any view of them: they had the effect merely of a looking-glass. A man may be seen standing in front of a picture and shifting about from side to side trying hard to see it; he will wave his hat about so as to obstruct objectionable reflections in the hope of seeing a little patch at a time. Would it not be possible to have temporary black screens to put in front of pictures which suffer in that way, so as to give the visitor a chance of seeing them by standing with the screen behind him? There was no other way of getting a view of these pictures.

The CHAIRMAN, in putting the vote of thanks, said they would all agree in thanking Mr. Hall for a very valuable paper. As Mr. Hall truly said, the whole subject was a very difficult one. But difficulties were the architect's opportunity, and as architects he thought they would only have one view, viz. that fine art must be finely housed. The various practical problems must, however, be faced and none of them shirked, for in so far as a building of this sort failed in its practical purpose it failed also as a real piece of architecture.

Mr. HALL, in reply, said he should like to mention that he had had a letter from Sir Charles Holroyd regretting his inability to come to the meeting, and saying some kind things about his paper. But one point he did criticise, and that was the difficulty of policing small rooms for cabinet pictures off large galleries. The difficulty was in providing so many attendants to protect them adequately, and also to police the attendants. One speaker had raised the question of glass on oil paintings. The only reason glass was put on was to protect the pictures. But it was a very practical difficulty, and all who were connected with picture galleries knew that it was a source of anxiety

and trouble to everybody. To put screens in front of every picture which had glass over it would be a great obstruction to the public, and he doubted if it would be practicable.

Mr. W. LEE HANKEY, Roy. Soc. Painter-Etchers, writes:—In thinking over Mr. Hall's most excellent Paper, one or two points have occurred to me which, from a painter's point of view, I should like to mention. The question of the floor is one of the most important factors in a successfully arranged picture gallery or gallery where works of art are displayed. There can be nothing so disquieting to the student of art, and unknowingly to the casual visitor, as the polished floor of parquet or wood block which obtains at South Kensington first-floor galleries and the National Gallery. Also the presence of highly polished wooden cases with their attendant legs repeated by reflections in the floor is, to say the least, disturbing and enervating to the optic nerve. It seems to me that all surfaces, whether ceiling, wall, cornice moulding, or floor, should be devoid of anything that makes a "high light" or reflection possible. I would suggest the much despised linoleum of a grey-green tone for the floor, and the walls, as Mr. Hall so wisely proposed, a grey-green, red, or buff. The furniture for the display of art objects would not offend if it were made in the usual hardwood, and oiled or subdued with stain. Get rid of all mirror-like surfaces. I realise the necessity there is for the hideous glass cases, but the object should be to display the works of art and to subdue as much as possible the means used to protect them. Mr. Hall ought to receive the greatest possible support in his idea of curtailing the height of the walls in a picture gallery. One cannot blame the provincial bodies when such an example of overcrowding is put before them year after year in the "Piccadilly Picture Shop." This may appear somewhat outside the question at issue, but the absence of a good example in England has no doubt led to huge mistakes in our London and provincial picture galleries. Mr. Hall's notion of having large store-rooms in a museum appeals strongly, for the overcrowding of pictures and art objects is to be deplored, and the annual change of the exhibits would enhance their value from a spectacular point of view. Get rid of the *mêlée* now caused by the overcrowding, and let us see beauty in a simple and dignified manner. Of course the dream of the modern painter is that there should be a building large enough for his efforts to be placed so that they can be seen to advantage—that each should be favoured by a modicum of isolation, and should not be, as one artist remarked, "mosaic'd" on to a wall in company with antagonistic ideals. How long will it be before England will be rich enough to build wall space to exhibit fairly the yearly output of the artists she possesses?

REVIEWS.

RACIAL CHARACTER IN ARCHITECTURE.

The Works of Man. By Leslie March Phillipps, Author of "In the Desert." 8o. Lond. 1911. *7s. 6d. net.* [*Duckworth & Co., Henrietta Street, Covent Garden.*]

It was only the other day that it was pointed out in the Journal that before we condemn Baroque work we should try to re-create for ourselves the atmosphere in which it flourished, and it was argued that, if we did so, we should find that it was in keeping not only with design and costume, but with manners and customs, with the mental outlook and attitude towards life of the people, or class, which was responsible for it, and that much of our criticism of it would be felt to be entirely beside the mark. The hint struck one as being valuable, and here comes Mr. March Phillipps's book, I had almost said to drive the suggestion home, but, if not precisely that, at least to show us how truly architecture and in their degree sculpture and painting are—or must we not say "were"?—an accurate picture of contemporary civilisation, a species of historical evidence incomparably illuminative of the men who practised them.

Those of us who do not cultivate overmuch the habit of independent thinking fall an easy prey to the last speaker, and find every argument convincing till we hear the next: so it came about that when I read Professor Blomfield's *The Mistress Art* I was perhaps too easily captured by his high appreciation of Egyptian art. In the forests of stone at Karnak he saw evidence of the supreme control of the master mind; but Karnak, as Mr. March Phillipps shows, on the authority of Herr Erman, is historically an agglomeration of courts and pylons added by king after king to both ends of the building, all of them intent on leaving their own mark on it and little regardful of the work of their predecessors; and now one is disposed to think that this is the more correct view, and that this particular building illustrates as forcibly as any other the theory which Mr. March Phillipps proceeds to explain.

Art for him is primarily intellectual, not æsthetic: it moves *pari passu* with the ebb and flow of intellectual perception, and its varied manifestations at different times and in different countries attest the level attained in the intellectual life of the people. Nowhere is the relation between intellectual development and architectural forms closer than in Egypt, and nowhere does the intimacy of the relation come to the solution of difficulties with a greater power of conviction.

Egyptian art has always been somewhat of an enigma: the stubborn persistence of form, and

that form both uncouth and unconstructional, with the gradual perfecting of craftsmanship—a contrast unparalleled except perhaps in the Euphrates Valley—is unintelligible unless it is accompanied by a similar stagnation of intellectual activity. Mr. Phillipps argues, not from general culture to architecture, but the reverse way, and, confronted with an architecture so singularly unprogressive, looks for a people whose whole intellectual life shall show a similar mechanical species of development, increased dexterity in their immemorial tasks, but no reaching-out to new activities; and this is what he finds: a steady persistence of animal worship among the great bulk of the people, a religion void of introspection and incurious of first causes, a verbal scholarship of a quite sterile kind, a history which is a mere wordy panegyric of victorious kings, mathematics and medicine almost fossilised in an early stage—in a word, a practical negation of thought; and why was this? What condition was there prevalent in Egypt and in Assyria which has never obtained elsewhere? There can only be one answer, the unexampled monotony of Nature. What Nature was Man was, and we need not wonder if he was lulled into a condition of stupor. The Nile in Egypt, the Tigris and Euphrates in their degree, performing every year those mighty and unvarying functions on which the very existence of the people depended, made of the whole peasant population a mere machine. Man's Egypt, Mr. March Phillipps says, persisted in mimicking Nature's.

History is written in architecture, and Hugo recognised this when he said that the printing-press would kill the more cumbrous mode of expression. Whether he was right or not, everyone who is interested in the "Mistress Art" will be grateful to the author for having once again shown how a people proclaimed, and confessed, its victories, its aspirations, its failures through its buildings far more than through its sculpture or painting.

Space does not admit of my dealing otherwise than cursorily with the remainder of the volume, but all students of architecture should make a point of reading it for themselves.

To pass from Egypt to Greece is to leave the mists of the lowlands for the pure and austere air of the mountain heights, and the chapters on Greek art may be said to rise to the level of their subject. Egypt stood for routine: form and the motives of decoration were held fast in the icy bonds of tradition; but Greek art was like Mother Nature rousing herself at the touch of spring: intellect had suddenly become vital; the scales had fallen from the eyes of the mind. In art, in science, in philosophy, in drama, in every sphere of mental activity, there was the same stirring of dead bones, the same surging of young blood through the atrophied arteries. But the predominance of the intellect had the effect of narrowing the outlook of the Greek: he cultivated lucidity of thought, and asked for definition before everything, and it is in sculpture that he is perhaps most characteristically expressed because, as Mr. March Phillipps says, "Sculpture is definition," and "a sculptor cutting his figure free from the marble is the counterpart of the intellectual developing the construction of the argument." And so it comes about that there is always something wanting in the Greek, something that he cannot give to the modern, either in his art or in his thought. His gods were anthropomorphic because man was his centre of thought and his measure; they were perfect Man, and, like him, they lacked the spiritual element. Here it was that Florence, the centre of the Renaissance movement, the only movement in the world's history at all comparable to that of the Periclean era in Athens, gave something to art which Athens could not. The qualities of harmony and self-control, the ethical character and basis of Greek art, she never succeeded in capturing, and great was her loss, but no one can look at Michelangelo's work without feeling how his spiritual aspirations exhale from all he set hand to.

Gothic architecture expressed ideas; it may be even that its æsthetic side was not realised by those who worked in it. Its forms, always mounting upwards, while Classic and Renaissance alike opened their arms to enfold space, pictured the fierce enthusiasms and energies of the crusades, the vigour of guilds, the spirit and independence of a democracy; but Greek art, according to Mr. March Phillipps, did not express ideas, but initiated them. This is a hard saying, and he admits as much while he develops his idea in an interesting way. The infinitely small and subtle rectifications in the Doric temple, which correct offences to the eye resulting from the operation of the laws of optics, saturate the work with ideas which were not furnished by the mind, but by the eye: they were not put into the work as ideas, but they may be taken out of it as such. The qualities of Greek architecture seem naturally to express themselves in words which equally belong to the sphere of conduct, and preach the virtues of order, economy, and the like. "The Doric temple was æsthetical enough to be ethical." It was, in fine, a sermon in stone.

For the rest I must let the book speak for itself. Arabs and Goths, the men of the Italian Renaissance, the French Court of the fifteenth and sixteenth Louis, the primitives and their successors in pictorial art, follow one another in Mr. March Phillipps's pages, and as he deals with each of them and works out his theory, he points his moral with illuminating phrases which at once take their lodging in the reader's memory as by right divine. The book is pre-eminently the work of a man who does his own thinking, and the bibliography which he appends shows that he has the requisite capacity for taking pains.

A. E. Street [*F.*].

THE NEW EDITION OF FERGUSSON.

History of Indian and Eastern Architecture. By the late James Fergusson. Revised and edited with additions. Indian Architecture, by James Burgess, C.I.E., LL.D. Eastern Architecture, by R. Phené Spiers, F.S.A. 8o. *Lond.* 1911. [*John Murray, Albemarle Street.*]

The new edition of this standard work has been admirably carried out by the joint editors. The original single volume of some 700 pages is now published as two volumes of 970 pages. The type is much clearer than in the original, and the editors have availed themselves of the advantages of process-block printing—unknown in Fergusson's time—adding to the text a considerable number of judiciously selected illustrations.

Perhaps no testimony speaks so eloquently of the genius of Fergusson as the fact that, although hundreds of workers have been engaged in this field of archæological research since his day, the historical arrangement and conclusions deduced remain much as he left them. In the new edition a few dates have been corrected, and a more accurate statement—based on the returns of the last census—of the distribution and numbers forming the various religions of the East is given, but the more complex problems connected with the rise and evolution of forms, and their translation, have yet to be solved.

In the Indian Section an important change is made in the arrangement of the Books. In the original edition Book II. was devoted to Jain Architecture; in the new edition this book disappears, and Books II., III., and IV. of the original now become Books II. and III. of the revised edition; by this arrangement the distinctive features of the styles are more easily followed.

In the introductory chapter to the Dravidian styles, page 322, under the heading "Sikharas," the difficulty of accounting for the curvilinear outline of this feature is commented upon. An intelligent Hindoo once gave the writer a possible explanation of its origin. He said that originally the vimana was a triple-salient-angle square with a flat roof; in the centre a tall pole supported the sacred emblem. The offerings during a festival consisted of chattees (pots) full of rice and vegetables, covered by a square flat tile, the leaves protruding below the tile. As these offerings were brought in they were piled one on the other on the top of the vimana and around the central pole until they reached the emblem. There can be no doubt that such a pile of chattees would assume the curvilinear outline. It is also curious to note that many of these sikharas consist of a series of such gifts piled one over the other, imitating exactly a pile of offerings. The three-salient-angle capital, afterwards so common throughout Guzerat, Gwalior, and Agra, must claim as its ancestors the capitals shown on pp. 300–301, Vol. I.; its highest development is probably found in the roof pavilion of Akbar's palace at Agra, and its features may still be traced in the beautiful though debased work of Futteepoor Sikri, page 294, Vol. II. Although the above-mentioned origin of the curvilinear form of the sikhara may be fanciful, the writer thinks that an analysis of the evolution of this capital would throw much light on the development of Eastern architecture. The leaves are sometimes turned up, as on the cresting of plinths, stylobates, or strings, and sometimes dependent, as in capitals, bases, and sikharas, varying from the simple block outline of the half-leaf to the complicated triple-pointed voluted and veined form found in the most ornate period of this beautiful style.

The new arrangement of books already alluded to brings the southern rock-cut work into its proper place as a preface to Dravidian art. Although epigraphy is an important adjunct of archæological research, it would be quite wrong to put either epigraphy or history before the unerring testimony of form developments. Pagan temples have served as Christian churches, Christian churches as mosques, and so forth, and many buildings have been completely overlaid. The keen eye of Fergusson detected that what we see now in Humayon's tomb was not the work of Akbar, yet the historical records remain, and are seemingly unquestioned by contemporary authorities! The inscriptions translated by Hultzsch make the date of the works at Mahavilapuram the last quarter of the seventh century, but it must be borne in mind that this may be the date of the inscription. If this is about the date when the works themselves were executed the dates assigned to the Javanese and Orissa works seem much too early. At the seven pagodas on Dharmarajas Rath (woodcut 190, page 334, Vol. I.) all the figures originally had but two arms. If the drawing is examined with the aid of a magnifying glass, it will be seen that extra arms have been added by cutting deeper into the rock; the right-hand lowest figure shows this clearly. Again the central figure in the upper group has a well-defined nimbus. In Jain figures there is a form which might be mistaken for a nimbus, but which really seems to be the back of a throne rising above the figure, for the head of the figure is sometimes so high in this form that it is cut by the head on a level with the ears. The central figure with the unmistakable nimbus is neither Buddhist nor Jaina, for it is *standing*. Is it possible that these early examples of rock cutting were the works of Christians, say in the fourth or fifth century of our era? It must be remembered in connection with such a conjecture that a few miles north of these remains lies the scene of the legend of St. Thomas's visit to India, which gives name to the suburb of Madras called St. Thomé. Indeed, the south of India from the earliest records to the present moment has been the centre of Christian activity. Robert de Nobilis in the sixteenth century aroused such jealousy by his immense success that the Pope was instigated to excommunicate

him! Even now a traveller on the west coast backwaters is amazed to see, at the end of some canal vista, a cathedral-like façade rising high among the tall palm-trees which on closer inspection turns out to be a façade only hiding a thatched hut of a church.

> They raised a front upon the stream
> Like old Westminster Abbey;
> And then they thought they'd cheat the Lord!
> They built the back part shabby!

It must also be borne in mind that in those early days, when the truths of religion were conveyed orally and doctrines were confined to the priesthood, religions and beliefs overlapped to a much greater extent than in the present time; the Christianity of Constantine, for instance, retained much of the pagan ceremonial, and broad truths common to all religions would tend to make men more brotherly than when doctrine had mapped out its suppositional boundaries of right and wrong. Although mere conjecture, it is not impossible to imagine a band of Christians in the third or fourth century of our era commencing these works and flying from the inevitable persecution before they were finished; years elapse and the work is taken in hand by Buddhists, then altered to suit the religious scruples of Hindoos, and finally left in its present state. The editor says, speaking of these figures, page 333: "We have on this Rath many of the Gods of the Hindoo pantheon, but in forms more subdued than are to be found elsewhere. The one extravagance is that they generally have four arms," but these are additions, as stated above. The great bas-relief called Arjuna's penance, in the same group of works, seems to illustrate the Elohistic Creation as recorded in the Book of Genesis. The editor says the meaning of the work is a "complete puzzle," but if we rid it of all possible additions and alterations we are left with a fair representation of Elohim (the principal figure) dividing the waters which were under the firmament from the waters which were above the firmament, and the male and female of all species appearing. A careful and critical examination must be made of every possible alteration and addition before any sound conclusions can be reached.

Chapter v., relating to Chaitya Halls, has been enlarged and enriched with nearly double the number of illustrations.

The section on Dravidian art has been greatly extended and many valuable illustrations added. A curious fact connected with Dravidian art does not appear to have been noticed, viz. that the later works were monolithic. The great statue of Siva in Madura must have been carved out of a huge block of granite about sixteen feet cube, and the columns of this period, although apparently clustered, were carved from single blocks of granite. Indeed, Hindoos at this period seemed to recognise the fact that architectural works first fail on the surface at the joints, and much of the work executed at this period will be intact when most of our own work will be crumbled ruin.

Many interesting photographs have been added to the chapter on Ceylon. The restoration of the Thuparina Dagoba shows clearly that when plaster is the material employed, no reliance can be placed on its reproduction of what formerly existed. Nothing but the liveliest imagination could trace in the restoration of this monument (p. 234) the lines shown in Mr. Prinsep's drawing on the same page, although all the essential features are the same.

Fergusson regards the rows of columns surrounding these structures as ornaments perhaps marking out pathways for processions. Mr. Burgess, on the other hand, thinks they may have supported light roofs. Of this the writer thinks there can be no doubt. All have tenons on the top for morticing beams, and the respective lengths of the three rows decrease so as to allow a fall of three feet outwards for drainage. Mr. Burgess's idea receives confirmation from the fact that the steps to the Rewanvelli Dagoba, p. 240, undoubtedly led to a covered area, and if covered here would be covered elsewhere.

In chapter v., dealing with Civil Architecture, it should be noted that the level of the ground around all the specimens illustrated has risen very considerably both inside and outside. The hall shown on page 414 has a plinth below the columns about three feet high; the courtyard on page 415 should reveal the bases of the columns and a plinth three or four feet high, and the pavilion on page 417 has well-proportioned arches and openings also above a plinth.

Further India is edited by Mr. Phené Spiers. It is so much enlarged as to be practically re-written, and numerous beautiful and well-selected photographs have been added. The editor makes Java the second chapter instead of the fourth, and Japan is treated separately from China.

Since Fergusson's time great activity has prevailed in the various fields of archæological research in the countries east of India; the editor has availed himself of the results of this activity and added a concise and logical introductory chapter classifying the various types of religious edifices; but the more we know of Javanese and Cambodian art remains, the less stable seems the theory that the architecture of the Straits did not come from the centre of Dravidian art. Fergusson says: 'It may be that as we know nothing practically of the architectural forms of the Lower Bengal provinces before the beginning of the 6th century, these forms may have been taken to Prome and Pegu before that time, or it may be that a northern or Tibetan element crept into Burma across the northern mountains by some route we cannot now follow." The material in the editor's hands tends to strengthen this conjecture, and it is difficult to evade the conclusion that Dravidian art owes more to the Straits than the Straits do to it. No one

acquainted with the feeling expressed in Dravidian art could evolve from it the beautiful proportions shown on woodcut 465, p. 388, Vol. II., or the richness of the arabesquing in woodcut 471, p. 398, or the classical proportions of the doorways (plates 53 and 54). These openings are exactly twice the breadth in height, which is not the rule of proportion for openings as laid down in the "Shilpi Shastras." The roofs of the older temples in Travancore and in the old palace of Palpanabapuram seem to derive their chief characteristics from Burma and the Straits. To use Fergusson's expression, "be this as it may," every lover of Eastern art will feel deeply grateful for this new edition which so ably and conscientiously continues Fergusson's labours.

Southsea. R. F. CHISHOLM [*F.*], F.M.U.

POMPEII.

Pompeian Decorations. Illustrated by a Series of Coloured Drawings. Accompanied by a Descriptive Text. By R. A. Briggs, Soane Medallist, F.R.I.B.A. Fo. Lond. 1912. *25s. net.* [*B. T. Batsford, 94 High Holborn.*]

Pompeii, a city of Campania, was beautifully situated on the shore of the bay of Naples at the foot of Mount Vesuvius. Its inhabitants claimed Heracles as their founder, but on unconvincing evidence, and they themselves seem to have been an undistinguished people occupied in trade and in supplying the wants of visitors (Cicero among the number) from Rome and other inland towns during "the season."

The Pompeians were a sporting people, maintaining an amphitheatre 430 feet by 435 feet, and taking the keenest interest in the games. It was an interest apparently over-enthusiastic and possibly partial, for one learns from Tacitus (*Ann.* xiv. 17) that in 59 A.D. a dispute arose over a contest between a home team of gladiators and visitors from Nuceria, and that so violent was the indignation of the crowd that they broke through the barriers and killed and wounded many of their guests. The proceeding was evidently not customary, as the State forthwith prohibited "games" at Pompeii for a period of ten years.

These events, though doubtless exciting some interest at the time, are hardly history in the grand manner, and neither do such facts that Q. Catullus was consul in 78 B.C. or that Popidius Celsinus restored the temple of Isis after an earthquake in 63 constitute a claim to immortality. In this respect good fortune came to Pompeii in 79 A.D., when it was overwhelmed by a shower of small stones, cinders, and moist ashes which fell upon it from Vesuvius. Temples, houses, theatres were filled with the deposit, and the whole city covered to a depth of from eighteen to twenty feet.

The people of the neighbourhood seem to have very quickly stripped the marble from the arena (which was, possibly from its situation on the outskirts, easily accessible), but the main portion of the city was left untouched. The middle ages, as one would imagine, forgot the place entirely, and it was not until the reign of Charles III., 1738, that excavation was attempted; even then, and later by Joseph Bonaparte and Murat, the dominating motive was a desire for loot. In 1860, however, under the supervision of Signor Giuseppe Fiorelli, systematic and careful work was commenced for antiquarian purposes, and to-day we see as a result a city built at the commencement of our era, roofless and ruined, it is true, but in a way marvellously perfect. There are streets narrow, and paved with polygonal blocks of basaltic lava, hard, yet worn into ruts by the passage of carts; streets with raised trottoirs or footpaths connected at the crossing by stepping stones; sleepy Oriental-looking houses with their windows inwards; shops numerous enough in some cases to form a continuous façade to the street and used often by the owner of the big house at the back to sell his farm, vineyard, or orchard produce; temples, theatres, a forum, a market, utensils of trade and domesticity, paintings and inscriptions.

Up to 1891, five hundred books and pamphlets had been written about this (at the time of its building) ordinary town, some of them of a reasonable size, others, like the great works of Bahn (Berlin, 1827) and Nicollini (Naples, 1854), requiring the aid of a cathedral lectern. The last of these (it is one of moderate size and cost) is by Mr. R. A. Briggs, and is published by Batsford.

The city of Pompeii is constructed of limestone, brick, and tuff—all rough and covered generally with plaster, thick, and by reason of the use of marble dust, hard, and of fine surface. This surface is left, in the inferior parts of the buildings, white, but in the principal rooms and on the exterior often painted in fresco or (later) distemper.

The earlier books on the subject, owing largely to primitive processes of colour reproduction, have not made these mural paintings very attractive. The tints as printed are often unpleasant separately and in combination, and as hard as a catalogue of commercial paint. But the three-colour process has arrived, and in conjunction with the charming and delicate drawing of Mr. Briggs makes yet another book necessary and welcome.

The author acknowledges his indebtedness for much of his pleasantly written introduction to Mr. Mau, and a serious student of the subject will find Sir William Gell's work with its dignified and gracious steel engravings essential. But the lover of colour will discover in Mr. Briggs's book a charm unattained by any of his five hundred predecessors. Such drawings as that of the black "Frieze in the Naples Museum," with its vigorous yet extremely delicate reproduction of the birds, fruit, and flowers, are likely to have a distinct influence on the decoration of the immediate future, and an influence entirely for good.

One could wish, however, that instead of the two rather unconvincing sketches in perspective of

tombs and a garden seat, we had been given views of "the house of the mosaic columns," or the "Stabian baths," showing their decoration *in situ*. I presume the publisher appreciates the value of "surprise" in art, for the shining and somewhat assertive cover, with its stern and uncompromising lettering on the back, leads one to expect an inwardness devoted to sanitary fittings, rather than joyous decoration.

As I have said, Mr. Briggs acknowledges his indebtedness to others for many of the opinions in his introduction; the concluding sentence I believe to be his own exclusively: "The inspiration of these decorations is infinite, and the language in which they speak is everlasting." As a review should not be all acquiescence, I presume to criticise. The mural paintings are dainty, delicate, vigorous, full of charm; but of inspiration and infinity, in the usual acceptation of the words, I see nothing. It may be that my eyes are holden, but are these highest qualities to be expected from the Pompeians? From the inscriptions scratched or painted on their walls, one infers that they were a people somewhat sordid:

"Welcome gain."
"Gain is pure joy."
"Make Sabonus Ædile and he will do much for you."

With a tendency to be influenced by commonplace sentiment:

"His little sweetheart is working for the election of Claudius."

Loose, or libellous (one hopes the latter):

"Restitutus has many times deceived many girls."

They produced no authors, poets, warriors, or statesmen of high repute, and their art is finite, and inspired, but of things material. The Gods *appear*, it is true—Apollo, Bacchus, the sunny gods of Greece and Rome—but they appear simply as decoration, painted with no aid from the "light which never was on sea or land." One feels that the Pompeian artists eat, drink, and are merry with no thought of the morrow when we die. There is nothing tragic, nothing heroic; and the art of the painter, to become "inspired" and "infinite," had to wait for that glorious mingling of earthly beauty and heavenly faith given by "whatever gods may be" to the fair land of the Pompeians 1800 years after their destruction.

HERBERT G. IBBERSON [*F.*].

CORRESPONDENCE.

Registration.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Our Committee's attention has been drawn to a letter by Mr. Hiorns published in the JOURNAL of 10th February, in which he challenges the existence of a widely expressed desire in the profession for Registration. Such a view must be incomprehensible to those who have followed with interest the course of events which led up to the unanimous adoption by the Institute of the Registration policy in 1907.

For some years previous to that date the whole profession was deeply stirred by the subject, inasmuch as it was painfully conscious of the encroachments which were—and are still—being made on legitimate interests of the profession by unqualified persons and trading firms. The agitation culminated in a demonstration of opinion at the Institute's elections, when the "Registrationists" emphasised the demand for such a policy by electing a Registration Council, in place of that which had previously opposed their ideas.

The *Builder* had been practically "Anti-Registrationist" up to that date, and in order to attest the opinion of the profession it conducted a *plébiscite* which resulted in a very large majority of practising architects in the United Kingdom voting in favour of Registration as the policy which met their most pressing requirements. The Institute could not be blind to such a strongly manifested desire, and therefore appointed a very strong Committee of leading members of the Institute, representing all shades of opinion in regard to this question. The Committee reported that after holding 15 sittings and hearing the evidence and views of twenty-four architects from various parts of England, Scotland, and Ireland, they were unanimously impressed with the desire of many architects (especially those practising in the provinces) that a legal status should be given to duly qualified practitioners in architecture, and they went on to express their belief that in a short time the holding of a legal diploma would prove of professional value, and that such State recognition would encourage education and raise the qualifications of architects, and would at the same time avoid the temporary necessity of granting a statutory title to unqualified men.

The Committee's unanimous report is to be found in the JOURNAL of 9th March 1907, which also contains the plan suggested by the Committee for carrying their recommendations into effect. This report was adopted by the general body of members, and in due course Resolutions were submitted and carried unanimously by the general body of members in March 1907. These Resolutions have subsequently been referred to as the "Mandate," since the passing of which the whole profession has regarded Parliamentary Registration of Architects, under the auspices of the Institute, as a foregone conclusion; but, as in the case of all such reforms, the rank and file go for the broad principle of the measure and leave the general details to the executive body. In the present instance the profession, more particularly the members of the Institute, have left the details, by which Registration is to be carried into effect, in the hands of the Council with that confidence which is in itself a great tribute to them as a body. If this confidence is to remain un-

disturbed the Council should at the earliest possible moment produce a really practicable Bill based upon the principles laid down in the Registration Committee's Report of 1906.

We are conscious that we carry the weight of well-considered and responsible opinion when we state that no well-wisher of the Institute would like to see it torn into factions again, and the bitter fight and excitement of former times revived; neither do we wish to see the Institute stultifying its position by showing any hesitation in carrying out the solemn obligations which the Resolutions of March 1907 entrusted to the governing body.

That the President and Council are loyal to these Resolutions was plainly manifested by the following statement of the President at the Business Meeting of the 9th March: "The Council," he said, "do not consider that the question of Registration is still an open question. We consider that the Institute and Council are bound by the Resolutions passed on the 4th March 1907. As to the Council's proposals of the 8th January, these having been referred back for further consideration, the Council have appointed a strong Committee to consider the matter and report on the subject. The Council will in due course report to the general body."

As "Registrationists" we are, in common with other members of the Institute also in sympathy with that policy, keenly waiting for that report, for after the experience of recent years we confidently anticipate that the Committee will recommend a somewhat broader and more tolerant Registration scheme, commanding the support of all interested parties whether professional or educational, than that which has so far led to nothing being done of a tangible nature or calculated to inspire confidence among "Registrationists."

If, however, there should exist an opinion in the Institute that the Registration policy is no longer generally desired by the profession, let such an opinion be tested by an attempt to rescind these Resolutions. We are convinced that the result would show that the demand for such a policy is more firmly rooted than ever.—Yours faithfully,

ALBERT W. MOORE [*F.*],
HERBERT SHEPHERD [*A.*],
Hon. Secretaries Institute Members' Club.

Architectural Education.

MR. EDWARD A. JOLLYE [*A.*], in a communication which we have no space to print in full, commenting upon Mr. Dixon's letter in the last issue, says:—"The 'definite salary' savours of 'minimum wage.' Question of payment for services rendered depends much upon the state of the market. In an overcrowded market a few good ones find acceptance, the ordinary are a drug. If the students are ten times more highly trained, positions of assistants would not be any better if the numbers remained. The architects at the head of the profession are men of decided social standing. None of these want any but well-trained scholarly assistants except for minor office work, and one would not expect to pay a large salary for a tracing or copying clerk. At the same time this minor assistant has the privilege of seeing good work, and if observant he may learn a great deal. When we find Associates qualified as capable architects (as far as any examination can test their ability to practise) having a clientless field to enter, we feel they have chosen or have been directed into a fool's paradise! What can be done, and who should do it? We may envy, but we cannot abuse the men who being men of social standing find a ready supply of dependents. They entered the profession apparently with the assurance of having a field of operation. I have frequently advised parents who have desired to make their sons architects, to think again, and ask themselves if they can justly place their sons in the most exclusive profession! A broad and liberal education is necessary, a public school training desirable, and a University career almost essential. Travel must be part of the youth's curriculum, and this means a fair modicum of means at the embryo architect's disposal. Even with this propitious start, a genius is not assured; but should such men become qualified architects they will have a practically certain *clientèle*. This is the *high road*, but off the *low road* we may get very able practitioners, though their opportunities are necessarily limited. Whether architects like to employ a high-road or a low-road man should be left to them. Ability cannot be detected all at once, and I would oppose any Bill which might work unjustly, which might keep back a youth of ability and check the survival of the fittest. If we want architecture let that be our aim. If money, there are other channels in which it may be better and more abundantly acquired. Whatever happens, I don't see how architects can spend a longer time on education, as most of them are learning every day."

Books Received.

The Geology of Building Stones. By J. Allen Howe, B.Sc., F.G.S. Arnold's Geological Series. 8o. Lond. 1910. 7*s.* 6*d.* net. Edward Arnold, 41 and 43 Maddox Street, W.

Reinforced Concrete Design. By Oscar Faber, B.Sc., and P. G. Bowie. 8o. Lond. 1912. Price 12*s.* 6*d.* net. Edward Arnold, 41 and 43 Maddox Street, W.

Small Water Supplies, being a practical treatise on the methods of collecting, storing, and conveying water for domestic use in large country mansions, estates, and small villages and farms, for the use of Engineers, Estate Agents, and Owners of Country Property. By F. Noël Taylor, C.E. 8o. Lond. 1912. Price 6*s.* net. B. T. Batsford, 94 High Holborn.

The Making of London. By Sir Laurence Gomme. Illustrated. 8o. Lond. 1912. Price 3*s.* 6*d.* net. Henry Frowde, Oxford University Press, Amen Corner, E.C.

The Story of Jerusalem. By Colonel Sir C. M. Watson, K.C.M.G., C.B., M.A., &c. Illustrated by Geneviève Watson. Mediæval Town Series. Sm. 8o. Lond. 1912. Price 4*s.* 6*d.* net. J. M. Dent & Sons, Ltd.

Keystones of Building. By F. Inigo Thomas. With 2 illustrations by the author. 8o. Lond. 1912. Price 2*s.* 6*d.* net. John Lane, The Bodley Head.

9 Conduit Street, London, W., 13*th April* 1912.

CHRONICLE.

Municipal Officials and Architectural Work.

On the 21st March a deputation from the Glasgow Institute of Architects, headed by the President, Mr. John B. Wilson [*F.*], waited upon the Corporation of Glasgow, for the purpose of entering a protest against the policy of the Corporation in employing municipal officials to carry out works of architecture, especially in relation to the proposed Municipal Buildings Extension. Mr. Wilson addressed the Corporation as follows :—

We, as representing the Glasgow Institute of Architects (which, I may mention, has a membership of some 200), and through it, the profession generally, have asked permission to approach you regarding the employment of officials in carrying out works of architecture, and in particular on this occasion with respect to that policy as it affects the proposed Municipal Buildings Extension, a work which, from its extent and situation, must form one of the architectural features of the city.

We desire respectfully to enter our protest against such a course being followed, to some extent, naturally, in our own interests, but mainly in those of the community. In doing so, we have no wish to make too much of our own importance, or to belittle the merit of others, but come before you as those having, through our professional training and experience, a well-grounded knowledge of the subject in question, in the hope that you, gentlemen, will not lightly set aside such information as we can provide, or advice we may offer.

That it is not only the duty, but the desire, of each member of the Town Council to secure the best possible results from the expenditure of public money on its buildings, may be taken for granted; and that also, it may be presumed, at the standard rate of wages, not only for the workmen who erect, but the man who designs them.

Such best results, we believe, or rather I may say we know, cannot be achieved if architectural work of an important nature, such as the building in contemplation, is entrusted to the City Engineer.

We have no desire to undervalue, in his own particular line, the ability of Mr. M'Donald, but it is a simple fact that, in the first place, he is necessarily much engrossed in administrative work, and consequently unable to devote the undivided attention from its first inception to its completion which an important building absolutely requires; and this would be the case whatever rearrangement of the Department may be decided upon by the Corporation; and in the second, that he is not possessed of the special qualifications and training in architecture to fit him in the highest degree for such work.

It follows that the engineer would, on both these accounts, be under the necessity of delegating the work to a very great extent to some members of his staff. The gentlemen so employed at present, we have every reason to believe, are efficient at the least up to the level of requirements of the positions they occupy, that of principal assistants; they possess, in some cases, special qualifications, though only such as are held by many of our younger architects and not a few of the head draughtsmen serving in the offices of our city and elsewhere; but their standing is certainly not such as to warrant your handing over to them works of magnitude and architectural importance.

While the staff is therefore not such as should be entrusted with the more or less independent handling of important buildings, it may be of larger number and of higher qualifications than would be required if, as we believe should be the case, its attention were confined to minor works and repairs. Such an arrangement was undoubtedly the reasoned intention of the Corporation when, on the death of Mr. Carrick in 1890, it resolved not to appoint a City Architect in his place, but to divide his work between the Master of Works and the City Engineer, except such as should be given to outside architects.

The intention, if not the wording of the Minute, has been largely departed from in recent years, though never to the extent now proposed. We would urge that it be reverted to with the addition of a sufficiently qualified architect in responsible charge, and suggest that a good opportunity is offered of doing so at this time in view of the changes in the Department under contemplation.

We would submit that, quite apart from the question of individual ability, the employment of an outside architect for all but routine work is to be preferred in the public interest for the following reasons among others :

(1) All experience of Departmental work of this nature shows the oncost in relation to the value of work executed to be greater, where everything is accounted for, than where done by outside men. Figures are not available to us for the city, but in the Scottish Board of Works Office it has been shown to be equal to 8 per cent., and in all the English instances investigated, considerably more.

(2) The lack of personal responsibility on the part of the designer when an official tends to indulgence on his part in extravagance in design and finish, and this is accentuated when his experience has been confined to that of a public office where the personal interest is not closely involved in controlling expenditure. On the other hand, an independent architect, being free from inside influences and accustomed to be held personally responsible for ultimate cost, is in a much better position to look after his clients' interests in that respect.

(3) The Corporation, with an independent architect employed, and a competent official to advise it, is not deprived of the value of expert criticism on the design of buildings to be erected for it, as it is when the official is also the designer.

I shall only advert, in conclusion, gentlemen, to the manifest injustice and hardship involved to the architects in Glasgow, who, through the rates, are under the necessity of contributing to the upkeep of a Departmental Office which, in such cases as this, threatens to become—as it has already done in other instances—a favoured competitor. The Corporation has set itself, with intention, to favour the artists of Glasgow by employing them in the decoration of this building and by the purchase of their pictures for the

Public Galleries. The same treatment should, in reason, be extended to the architects of the city, the more so that they are dependent in greater degree on the patronage of public bodies for the exercise of their art.

The work of Glasgow architects has a high reputation within and without the bounds of the city. They have done well for the Corporation in the past, from the days when your predecessors entrusted the designs of the Trades House to Adam, old St. Paul's Church to Hamilton, St. George's to Stark, and through other buildings too numerous to detail, to many important blocks of warehouses and dwellings under the Police Commissioners during recent years. I make bold to say that had the building we are in been designed by a Glasgow architect, and without so much official interference, it would have been a better one in every respect. With the design of the Tontine Buildings and the M'Lellan Galleries taken from us, we feel that the Corporation has not given us the consideration we merit, and we trust that, even yet, a better policy will be adopted—better for the community—while fairer to us—in connection with the building now to be considered: that, in such manner as you may decide—by direct commission, open competition, or otherwise—it will be entrusted to an independent architect.

It has been argued that plans having already been prepared by the staff to the instructions of the Corporation, they are not justified in setting these aside.

We believe that they are so justified because :—

(1) Such plans as have been prepared are little, if anything, more than would be necessary to arrive at particulars of the accommodation required and obtainable, and to form the basis of instructions to an architect on taking up the work.

(2) Should they be accepted, the Corporation prejudges the issues set before them, and precludes the city from obtaining better results elsewhere.

The debate on the subject of the Municipal Buildings Extension having been postponed, a copy of Mr. Wilson's address was forwarded to every member of the Town Council.

A note from Mr. MacLean, Secretary of the Glasgow Institute of Architects, received at the moment of going to press, states that the deputation has had the desired effect and the Corporation have decided to invite plans from outside architects for the proposed buildings.

Suggestion for a Traffic and Town Planning Board.

A series of articles reviewing the Housing Problem in London appeared in *The Times* of the 6th, 9th, and 10th April. The chief problems brought out in the first two articles appear to be four: viz. (1) The continuance of much overcrowding per room, in spite of the diminution of overcrowding per acre and the large number of empty houses; (2) the continuance of many small slums; (3) the urgent need of town-planning in Outer London; (4) the need for passing from old-fashioned municipal housing schemes, which aim merely at "housing the working classes," to municipal initiative in the co-ordination of the housing of different classes, as is done in a garden suburb scheme. The third article is devoted to the consideration of what are the most practical ways of dealing with the problems stated, and how far any need for new legislation is indicated by them. To deal with the special problem created by the vastness of London and its numerous municipal authorities, the formation of a Traffic and Town Planning Board is suggested. An interesting precedent has just been set in the case of Greater Berlin, where the Prussian Diet last year passed an Act constituting a new town-planning authority. This body, which has very full powers, controls practically the whole of a wide area, including, besides Berlin itself, Charlottenburg, Teltow-Beeskow, Spandau, Niederbarnim, Rixdorf, and many other populous and extensive areas under a large number of authorities.

Suggestions for London Improvements.

Mr. Wm. Woodward [*F.*], in a letter to *The Times* of the 10th April, refers to the vote by the Paris Municipal Council of £36,000,000 sterling for the improvement and embellishment of their city, and puts forward the following suggestions for London improvements, "assuming," he says, "that public opinion can be sufficiently interested to insist upon our authorities vying with the Paris Council in providing that money and that power which Paris sees will be amply returned in the attractions of a city made beautiful" :—

1. Let the Office of Works, the London County Council, and the City of Westminster put their heads together again, and deliver London from the present condition of the opening of the Mall to Charing Cross, which is a discredit to the nation. Widen Charing Cross at its Parliament Street end, clear away the adjacent houses in Cockspur Street, and lay out the site as Paris would do it.

2. Make Trafalgar Square worthy of what it is said to be, viz., the finest site in Europe.

3. Set back the railings of the Green Park, next Piccadilly, so as to widen the thoroughfare there and at the same time lessen the dip in the roadway.

4. Provide a "Valhalla" adjoining Westminster Abbey for our future heroes. Remove some of the worst of the monuments to our past great men from the Abbey to the new home, and restore that ruthless defacement of the architecture of the Abbey which was permitted in the darkest days of artistic indifference.

In a fifth suggestion Mr. Woodward proposes the Royal Botanic Gardens, Regent's Park, as a site for the new London University.

These Gardens (he says) are entirely within the Inner Circle of the park, and occupy an area of about eighteen acres. The site is central, is near the Tube railways and other means of easy access, and it has all the advantages of healthy and beautiful surroundings. The authorities of Bedford College have evidently thought the situation a good one, as they are now erecting their new building adjoining the Botanic Gardens, and the Royal Academy of Music has selected an adjacent site in the Marylebone Road, upon which it has just erected its new quarters. A considerable portion of the more beautiful parts of the Botanic Gardens, together with the lake, could remain to render additionally attractive and useful the University itself.

The Botanic Gardens are the freehold of the Crown, and it is well known that for many years past the lessees have found it difficult to make both ends meet, the condition of the Gardens themselves testifying to the want of money. An amalgamation with the Royal Horticultural Society would no doubt satisfy the public that botanic culture would not suffer.

The Office of Woods, with the assent of the Treasury and with the sanction of his Majesty the King, could grant the new University a perpetual lease at an annual rent consistent with the uses to which the site would be put: the matter is a national one, and I should be much surprised if the authorities I have mentioned regard it in any other light.

Suggested Royal Commission on Smoke and Health.

At the recent meeting of the Smoke Abatement Conference, Dr. H. A. Des Vœux read a paper in which he urged that the Government should appoint a Royal Commission to inquire into the whole subject of smoke abatement. He suggested that the Commission might inquire, among other things, what standard was desirable as to the colour or density of the smoke which should be deemed a nuisance; whether the present fines on offenders were sufficient; who should be punished; whether any industries should receive special treatment; the incidence, intensity, and duration of fogs and their effect on health; the influence of smoke on health and its damage to property; how far it was possible by smoke abatement to conserve our coal supplies; whether a time limit might be fixed during which the emission of smoke might be permitted to issue from factory shafts; and how far it was practicable to deal with smoke from private dwelling-houses. The Act passed in 1878, he said, had been a failure, and the time had come when the cause of that failure should be inquired into by an impartial tribunal.—The meeting passed a resolution recommending that the offer of Mr. Gordon Harvey, M.P., to introduce into Parliament the Smoke Abatement Bill prepared by the Smoke Abatement League be accepted, and that, failing any prospect of the Bill being passed next year, steps should be taken to organise a deputation to the Government to urge the appointment of a Royal Commission.

International Congresses in Rome on Archæology and the History of Art.

The third Congress of the International Congress of Archæology will take place in Rome from 9th to 16th October under the presidency of Commendatore Corrado Ricci, Director-General of Antiquities and Fine Arts. There will be twelve sections:—(1) Prehistoric Archæology; (2) Oriental Archæology; (3) Pre-Hellenic Archæology; (4) Italic and Etruscan Archæology; (5) History of Classical Art; (6) Greek and Roman Antiquities; (7) Epigraphy and the Study of Papyri; (8) Numismatics; (9) Mythology and the Study of Religions; (10) Ancient Topography; (11) Christian Archæology; and (12) Organisation of Archæological Studies. The price of a ticket of membership of the Congress is 20 lire, and members may obtain tickets for ladies of their family for 10 lire. Those who desire to read papers or to bring proposals before the Congress are requested to communicate with the secretary-general, Professor Lucio Mariani (to whom subscriptions should also be sent), Direzione-Generale di Antichità e Belle Arti, 11 Piazza Venezia, Rome. Two special excursions will be organised in connection with the Congress—one to Sardinia and the other to Magna Græcia and Sicily.

The tenth International Congress for the History of Art will be held immediately after the Archæological Congress, from 16th to 21st October, under the presidency of Professor Adolfo Venturi. The sections will deal with Christian, Romanesque, Gothic and Renaissance, and modern art, while a fifth section will discuss problems connected with organisation and methods of co-operation between workers of different countries. The cost of tickets of membership is 25 lire, but members may obtain tickets for ladies of their family for 10 lire. Visits have been arranged to the principal private collections of Rome and its neighbourhood, for which as a rule permission can only be obtained with great difficulty. Further information can be obtained from the secretary-general, Dr. Roberto Papini, Via Fabio Massimo 60, Rome. It is requested that those who may desire to bring communications before the Congress will inform him without delay. Holders of tickets of membership of either Congress will be entitled to return tickets to Rome at a very considerable reduction, available probably for forty-five days.

Port of London Authority: Designs for New Head Offices.

In response to the competition announced in November last inviting the submission of preliminary sketch designs for new head offices for the Port of London Authority, 170 designs were received. The Authority, on the advice of their assessor, Sir Aston Webb, C.B., R.A. [*F.*], have selected the six designs sent in by Mr. Robert Atkinson [*A.*], Messrs. J. A. Bowden & T. Wallis, Mr. Edwin Cooper [*F.*], Messrs. Lanchester [*F.*] & Rickards [*F.*], Mr. J. Reginald Truelove [*A.*], and Mr. Ernest W. Wray. The authors of these designs will be invited to take part in the final competition, at an honorarium of 200 guineas each. The Authority do not propose to exercise the right they reserved to themselves of inviting designs from architects other than those who took part in the preliminary competition.

"Shakespeare's England" at Earl's Court.

Amongst the exhibits that will be constructed for the show of "Shakespeare's England" to be opened on the 11th May in the Earl's Court grounds are full-size models of Staple Inn, the Globe Theatre, Bankside, and the Mermaid Tavern in Bread

Street, Cheapside, celebrated in verse by Francis Beaumont and Ben Jonson. The models of St. Mary's and Ford's Hospital, Coventry, Windsor cloisters, and Ledbury Hall have been prepared under the direction of Mr. E. L. Lutyens [*F.*]. The buildings for the exhibition are formed largely of a fireproof composition which can be made to look exactly like stone or brick or wood as may be desired. The architectural details are being moulded on the spot and built into place on plans drawn largely from Messrs. Garner and Stratton's book on Tudor Domestic Architecture, Mr. Gotch's on Architecture of the Renaissance, and the Architectural Association's Sketch-books. The Elizabethan Literary Society have formulated a scheme for the preparation of a map of London as in the days of Queen Elizabeth. It is intended to mark upon the map, sites, places, and buildings which are associated with the literary and social history of the city during the period of about eighty years that ended with the death of Massinger in 1640, or which possess other interest, and to plot the lines of the streets as contrasted with those of modern times.

Obituary.

John Samuel Phené, LL.D., F.S.A., F.G.S. [*Fellow*, elected 1872], whose death at the age of ninety was announced at the General Meeting of the 18th March, received his early education at King's Lynn Grammar School. He matriculated at Durham, removing to Trinity College, Cambridge. On quitting the University he became travelling tutor in the family of a wealthy relative, and was thus enabled to make the "grand tour." This generated a love of travel which possessed him all his life, and there were few parts of the globe he had not visited and explored in pursuit of his studies in comparative archæology. To quote from a memoir published in the *West London Press* of the 15th March, to which we are indebted for some of the details in this notice: "One branch of investigation took him from Iceland to South Africa, and in America from Lake Superior to the Gulf of Mexico. His journeys were always undertaken with a definite purpose. Thus he once followed carefully the various places in Byron's *Childe Harold's Pilgrimage*. In another he followed the missionary journeys of St. Paul, while later he visited the Seven Churches in Asia, mentioned in Revelation. In Greece he went to all the spots of classic fame, and in Asia, with Troy as a base, he followed the exploits of the Homeric heroes. In China and India he studied particularly the ancient routes of traffic and the ethnology of the various races. He spent some time in Japan exploring its many caves and tumuli, to aid him in elucidating the ancient religion of the country. In his wide researches he discovered no fewer than five unique and previously unknown temples—among them the ancient temple of the Cabieri in Samothrace, which an Austrian Imperial Commission had failed to find." His travels were mainly connected with his investigations into ancient religions and mythology. He had discovered an immense number of low ranges of hills, serpent-shaped, in different parts of the world, and his contention was that they were reared by prehistoric man when snake worship was prevalent. Before the British Association Dr. Phené entered upon a detailed comparison of pre-Roman works in Britain and Italy. In this he produced evidence as to the same original designs, the same nomenclature, and the same objects of worship, namely, the serpent and the dragon. In researches on the Duke of Argyll's estate at Ach-na-Goul, near Inveraray, his theory was strengthened by his excavating a subterranean temple having communicating chambers. A description of these researches was given by Dr. Phené in a Paper read before the Royal Institute in May 1873, entitled "On Results of a Recent Investigation into Ancient Monuments and Relics" [Transactions R.I.B.A., 1872–73, p. 181]. Dr. Phené exhaustively explored the less frequented parts of Greece—the Troad, Ephesus, Parnassus, Sparta—and published the results in various books and papers, including "Mycenæ and its Early Occupants," "Researches and Excavations in Argolis, Phocis, Bœotia, and other parts of Greece, illustrative of the pre-Hellenic Worship," and "Annotations on the earliest Greek, Hebrew, and Vedic Poetry." A Paper "On the Architecture of Troy and of Mycenæ" was read by him at a General Conference organised by the Institute in 1878 [Transactions R.I.B.A., 1877–78, p. 325]. Prehistoric Britain he was deeply interested in, and he published pamphlets "On some striking Historical and Linguistic Features belonging to the first 1,000 years of British History and attaching to the vicinity of the British Roads and Earthworks," "Ancient Pagan Deities of South Britain," and "King Arthur and St. George." One of his most popular essays was an appreciation of "Constantine," read before the British Archæological Association at York in 1891. Dr. Phené was one of the founders of the Huguenot Society and of the Japan Society. He was a foundation member of the Society for the Encouragement of the Fine Arts, a Fellow of the Society of Antiquaries, a Fellow of the Royal Archæological Society at Athens, and a Corresponding Member of the Academy of Sciences of New York. His work in surveying the wild country in America west of the Mississippi and Missouri won for him a high place in scientific America. He enjoyed the close friendship of many distinguished men, including Sir Henry Layard, the Marquis of Bute, Lord Tennyson, Bishop Creighton, Lord Kelvin, and the Marquis of Lothian, though perhaps his closest friend of early years was the late Rev. Edward Bradley, better known as "Cuthbert Bede," the author of *Verdant Green*. Dr. Phené

was the first to plant trees in a public thoroughfare, and his avenue of trees in Oakley Street, Chelsea, where he owned considerable property, attracted wide attention, being visited by Queen Victoria and the Prince Consort. Except that he was the architect fifty years ago of what is known as the "New Wing" of the Royal Free Hospital, Gray's Inn Road, little information is available as to his professional career as an architect. He was best known to ordinary people as being responsible for the remarkable Renaissance house at 76 Oakley Street. Dr. Phené claimed to be the descendant of an Italian family which crossed over into France and settled at Savenay on the Loire. There they built a château, which was destroyed in the last battle with the Vendéans. The château was one of several palaces held by the Phené family, one of which was Knole, in Kent, which in the reign of Henry VI. was sold by Sir William Phené for 4,000 marks to Thomas Bourchier, Archbishop of Canterbury. That the Phenés of Knole were of the Savenay branch was proved to Dr. Phené's mind by the fact that the crest of the Savenay family, a double-tailed mermaid, figures prominently in the decorative reliefs at Knole. His idea was therefore to erect in Oakley Street as exact a counterpart as possible of the château on the Loire. He visited Italy and got drawings and articles for use at Oakley Street, spending hundreds of pounds in securing what he conceived to be exact replicas. But he never finished his work, and for many years the house has been in a half-ruined condition, with the front door boarded up, netting over the windows, and dirt and grime covering everything. The garden is surrounded by a high and massive stone wall, topped by a fine iron railing, while over the door are cut the words "Renaissance du Château de Savenay.' Curious heraldic devices on the walls are supposed to represent, in a cryptic way, the ancient descent of his family from the Phœnicians through India, Persia, Troy, and Italy. Dr. Phené's remains were interred in the family grave at the village of Kensworth, near Dunstable.

James Redford [*Associate* 1865, *Fellow* 1872, *Retired Fellow* 1900], who died on the 10th December 1911, aged 74, was a man remarkable for determination and steadfastness of character, combined with a most practical ability and a minute thoroughness in all he undertook. At an early age he visited Canada, and returned with many interesting sketches of the Dominion as it then was. He spent the years 1862–1863 in Italy and France, covering a distance of 7,488 miles, and returning with a portfolio of most valuable sketches and detail drawings, several of which were reproduced in architectural journals, notably the Tomb of Guglielmo da Castelbarco, Verona, and the Cloisters of San Giovanni in Laterano, Rome. In the year 1864 he was awarded a Medal of Merit by the Royal Institute of British Architects for a set of "very neat" drawings, and a description of Croxden Abbey, Staffordshire, which also earned for him the thanks of antiquarians. In 1869 he designed a Pavilion for the shooting range of the 3rd Manchester Rifle Volunteers, which attracted considerable interest as it was erected on that portion of Chat Moss which presented one of the earliest difficulties in railway engineering. The Pavilion was placed on piles at a spot where the moss was found to be 22 feet deep, and an account of it was given in the *Illustrated London News* of 30th October of that year. Early in his career he was the architect of the Matlock Old Bath Hydropathic Establishment; The Schools for the Deaf and Dumb, Old Trafford; and St. David's Church, Wettenhall. His subsequent work was for a number of years of a very varied and extensive character, including houses, hotels, police stations, hospitals, banks, and mills. Latterly he did an unusual amount of brewery work, erecting amongst others the brewery for Jowett, Waterhouse & Co., at Oldham; The "Crown Brewery," Whittle Springs; and Robert Cain & Son's "Mersey Brewery," the largest in Liverpool. Apart from his profession he was in earlier life a keen volunteer and an excellent oarsman. He was also a freemason, and his Lodge presented him with a gold badge and illuminated address as a mark of esteem and appreciation for the services he had rendered in designing their ceremonial furniture. He had been in failing health since the death of his wife in 1907, and succumbed to an attack of pneumonia. He was buried in the same grave with his father, mother, and wife, at St. Paul's, Withington.—L. V. Cargill.

MINUTES. XI.

At the Eleventh General Meeting (Ordinary) of the Session 1911–12, held Monday, 1st April 1912, at 8 p.m.—Present: Mr. Ernest Newton, A.R.A., *Vice-President*, in the Chair; 20 Fellows (including 5 members of the Council), 41 Associates (including 1 member of the Council), 4 Hon. Associates, 10 Licentiates, and numerous visitors—the Minutes of the Meeting held 18th March 1912, being printed in the Journal, were taken as read and signed as correct.

The Hon. Secretary announced the decease of Frederick William Albury, *Retired Fellow*.

Mr. Frederick Alfred Crouch, *Associate*, attending for the first time since his election, was formally admitted by the Chairman.

A Paper by Mr. Edwin T. Hall [*F.*] on Art Museums and Picture Galleries having been read by the author and illustrated by lantern slides, a discussion ensued, and on the motion of Dr. Evans Hoyle, Director of the Welsh National Museum, seconded by Sir Wm. Goscombe John, R.A. [*Hon.A.*], a vote of thanks was passed to Mr. Hall by acclamation.

The Chairman announced that an Extra General Meeting had been called for Monday, 15th April, to resume the discussion of the Papers on "The Newer Responsibilities of Architects" [Journal, 13th January 1912], and to hear a further Paper on the subject by Mr. A. Saxon Snell [*F.*].

The proceedings then closed, and the Meeting separated at 9.55 p.m.

RIBA Architectural Library

St. George's Hall, Liverpool: Sketch by Elmes for Treatment of South Front.

THE ROYAL INSTITUTE LIBRARY AND SOME OF ITS CONTENTS.

By C. Harrison Townsend [*F.*].

Read before the Royal Institute of British Architects, Monday, 22nd April 1912.

WHEN the Council paid me the compliment of asking me to read a Paper on some of the contents of the Library, I accepted their invitation hardly realising how great my initial difficulty would be in selecting my material from the various alternative choices its shelves offer. Only those who have carefully and systematically examined our collection of books, for instance, know how fortunate we are in possessing many rare volumes of early works on architecture which are of exceptional interest.

Thus, the Library contains an extremely rare first edition of "The First and Chief Groundes of Architecture," by John Shute (1563), which is now, by the permission of the Council, about to be published in fac-simile by *Country Life*. We have, from the Royal Library of France, the "Recueil d'Estampes de différents auteurs concernant les bâtiments, les tapisseries, tableaux, conquêtes et autres sujets qu'on trouve dans les maisons royales" (Paris, 1660-69), a magnificent series of twenty-two folio volumes, with wide margins, and many extra prints (and, in some cases, reversed prints, probably unique), of the superb engravings. To this volume alone a paper might be dedicated. Our collection of the works of Vitruvius approaches being a complete one, and numbers sixty-eight volumes in Latin, French, Spanish, Italian, German, Dutch, and English, ranging downwards in date from the "editio princeps" of 1482-92. Again, and here I must stop with my illustrative examples of some of the more important of our books, we have, besides Alberti's "De re Ædificatoria" (1512) and others of his works, his "Hecatomphila," a volume which, if not very germane to architecture, is still excessively rare and almost unknown.

When considering the scope of my Paper one course I entertained was to pass in review some such works as those I have mentioned, with the object of pointing out to members our possession of them, and of providing a kind of guide or hand-book to a recognised body of highly interesting and useful material. The objection to my choice of this as my subject was, firstly, the utter impossibility of condensing a consideration of even the most important of these volumes within the limits I am allowed, and, secondly, the difficulty I should have found in producing anything which would have been very far removed from a bare catalogue

FIG. 1.—PROSCENIUM FOR THE QUEEN'S MASQUE OF INDIANDS: INIGO JONES.

and list of books—useful, most certainly, but not very entertaining. The interest in a volume can, after all, be but meagre, unless it lies before one for reference and examination—a course manifestly out of the question under our circumstances.

There is no doubt that such a list—a kind of *catalogue raisonné*—giving some short description of noteworthy and rare books would be exceedingly useful, even though it disturbed the rest of many years which some of our volumes have enjoyed on their shelves. It is to be

hoped that some book-lover may find time for its preparation, and I can promise him—what all work in a library must be—a delightful and engrossing task.

The Library of the Royal Institute of British Architects can make no claim to sentimental consideration based on an early foundation. Nor can it point to shelf after shelf of *incunabula* and other rare volumes as an appeal to the bibliophile. It is not a collector's, but, primarily and essentially, a working library, and of its contents those that possess rarity do not find place in its cases on that account, but rather because of their practical utility. Nor, again, compared with many specialising collections, is it very extensive. Its scope is almost entirely restricted to the confines of our own one subject—architecture—and so its 20,000 volumes cannot be put into comparison with libraries covering more extended and diverse fields, such as those of the War Office (80,000 volumes), Lincoln's Inn (72,000 volumes), the Goldsmiths' Company's Library of Economics and Literature (50,000 volumes), and the Society of Antiquaries (40,000 printed books and MSS.).

We are, nevertheless, happy in possessing a considerable number of original architectural drawings, either designs, or sketched or measured drawings of existing buildings, in many cases executed by men of note, and ranging from, say, Scamozzi, in the sixteenth century, to Burges and Nesfield of our own time. Thinking that the very existence of much of this material must be unknown to most of us, it occurred to me that it might be useful to lay some of it before you to-night, avoiding as far as possible the catalogue-enumeration danger, and alleviating what dryness may be inherent in the subject by the help of the lantern illustrations thrown on the screen.

For more than one reason I do not propose to deal with more than a very few of one noteworthy portion of our collection of original drawings. The very valuable Burlington-Devonshire collection (which, thanks to the initiation of Mr. Crace, was in 1894 placed in the custody of the Institute), consists of no less than seventeen bound volumes, and upwards of 300 miscellaneous drawings. It is manifestly impossible that a full consideration of these would allow me to discuss adequately any of the other contents of the Library. Again, I think we all recognise—his Paper of last session gives us claim to do so—that this collection may justly be looked upon as the particular province of Mr. Gotch, and I trust that when the annotated catalogue, upon which Mr. W. G. Keith, our Assistant Librarian, is spending much time and care, is ready to be placed in the hands of the members, it will be accompanied by one of Mr. Gotch's critical and illuminating Papers.

We do not own many drawings of early date. Our oldest is one the delicate and faint line of which prevents the possibility of my having an illustration of it made. It is a sheet containing drawings on both sides, and was presented to the Library in 1867 by Sidney Smirke, who was the younger brother of the better known Sir Robert Smirke.* A letter of explanation accompanied his gift, in which he explains that he had bought it at an old print-shop some thirty years previously, and goes on to say:—

"Considering the old and coarse make of the paper on which the sketches are drawn, and considering that the drawing had all the same stains and evidences of age thirty years ago that it has now: considering also the freedom and dexterity of the execution of the sketches, and the great improbability that fifty years ago, or indeed at any time within at least the last two centuries, anyone would have been likely to show such masterly dexterity in sketching ornament in the old German style, and such familiar knowledge of its peculiarities: taking all these matters into consideration I am so sanguine as to incline to the opinion that these sketches are really the production of an artist of the fifteenth century."

I am myself disposed to think the ascription of date is a little too sanguine, and that the

* *Metal Work.* Original sketches on both sides of one sheet, apparently the work of an artist of the fifteenth century.

sketches—the German character of which is, as Smirke says, obvious—come more probably from the early part of the sixteenth century.

Amongst some drawings consisting of the plan and elevation of the principal façade and staircases of the Villa di Papa Giulio, near the Porta del Popolo, Rome, is one labelled "Original drawing by Scamozzi." This portion of the villa, however, was built for Julius III. not by Scamozzi, but mostly by Vignola, though completed by Ammonati, to whom Letarouilly, in his *Edifices de Rome Moderne*, ascribes the whole of it. It seems more than likely that the drawing is not by Scamozzi, though certainly a nearly contemporaneous work, and perhaps, as Mr. Millard has suggested, "a measured drawing from the actual building." Comparison with the large collection of Scamozzi's drawings at Vicenza would probably clear up the point. The building as erected shows considerable variations as regards the plan (cf. Lubas and Debret's *Œuvres complètes de Vignola*, plate 64) from the sketch in the Library, but the elevational treatment is on much the same lines as the drawing, though, for instance, the niches on the first floor have, as executed, no pediments.

There are two drawings—exterior and interior architectural compositions—by Jacob van der Ulft (1627-1688),* drawn in Indian ink, and delicately touched with wash.

A volume of drawings and sketches by Fatali, presented to the Library by Professor Donaldson, contains eighty drawings of scenes and altar-pieces, mostly in quite a florid and rococo manner, drawn in brown ink and washed in with bistre or sepia.† The drawing shows alternate designs of one of these altar-pieces. The date of the work is about 1713, as is evident from a letter inserted in it addressed to Fatali's son, who, it would seem, himself drew some of the sketches, probably those which are somewhat more careful and quiet in drawing and more restrained in design.

Belonging to the Salvin collection are five valuable sheets of drawings which, there is every reason to believe, are from the hand of Inigo Jones. Two of these represent a proscenium designed, in the one case, for the masque of "Juno's Court, 1633," and in the other, for the "Queen's Masque of Indiands, 1634" [fig. 1]. The latter of these was, however, I find, actually used for the performance of Davenant's Masque of the "Temple of Love" in 1635. We know that this is so from the description in the book of this masque, published in that year, where the "Front" or proscenium used is thus described:—

"On the one side upon a basement sate an Indian on a white elephant, his legges shortening towards the neck of the beast, his tires and bases of severall coloured feathers representing the Indian Monarchy: on the other side an Asiatique, in the habit of an Indian borderer, riding on a Camell."

In the "Masque of Indiands," four chariots took their place at the rear of the procession, and of one of these we have Jones' sketch, thus described:—"All after the Roman forme adorned with much embossed and carved workes, and wrought with silver in his severall colours."

There is also a design for a scene, as to which it should be mentioned that the masque stage was arranged with a series of gradually advancing wings or flaps, then called "shutters," so that the stage space left for the performers was triangular on plan. Another drawing of a smaller front, two sword handles, and a cartouche in red chalk do not seem to be from Jones' hand.

In the Crace Collection of Views of Old London, in the British Museum, is a series of four prints engraved by Loggan, representing four triumphal arches thus described:—

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* Van der Ulft (J.), *Sketches: Italian compositions*, 1666.

† Fatali (G.), of Cremona. *Architectural Drawings and Sketches*, by Fatali and others. Altars, staircases, &c., with MS. notes, *circa* 1713.

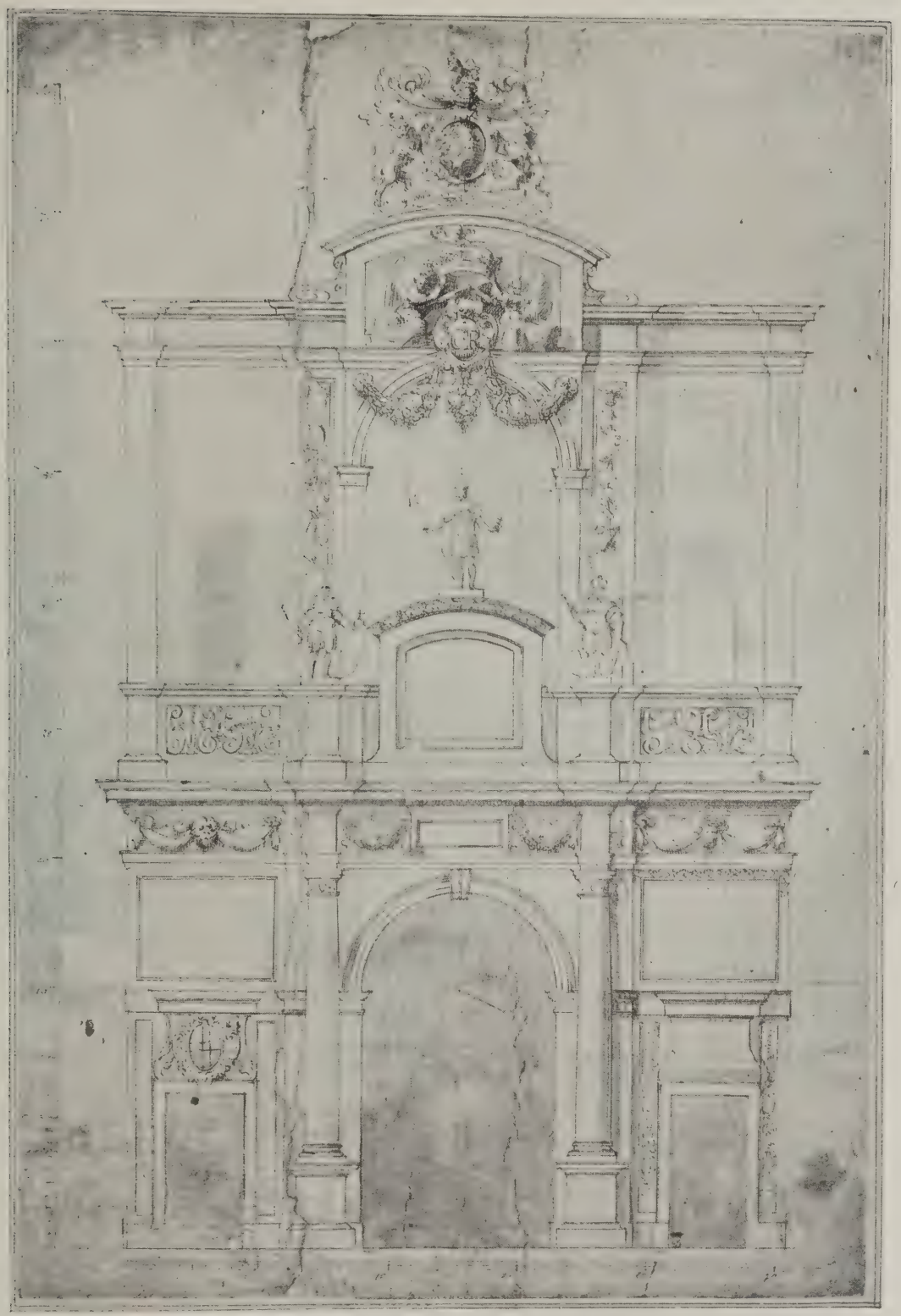

FIG. 2.—DESIGN FOR TRIUMPHAL ARCH ERECTED IN LEADENHALL STREET, 1661.

"Arches erected for the entry of King Charles into London on his Restoration, April 22, 1661." Of these we have in the Library the original drawings, about the same size as the engravings, and executed in light ink, with an Indian ink wash, though the engravings vary somewhat from the originals. The designs represent:—

The arch in Leadenhall Street commemorating "Monarchy Restored" [fig. 2].

FIG. 3.—SKETCH FOR FOUNTAIN: OPPENORD.

The arch near the Royal Exchange, commemorating "Loyalty Restored."

The arch near Whitefriars in Fleet Street, illustrating "A Garden of Plenty."

The arch near Wood Street in Cheapside, erected as "A Temple of Concord."

We now come to a remarkable volume consisting of 120 drawings by some of those draughtsmen of the late seventeenth and early eighteenth century,* who, I am afraid, come within the category of those lately described by Professor Blomfield as "industrious builders of 'Châteaux d'Espagne,' indefatigable and unprofitable designers in the air." The book contains sketches executed in pen-and-ink, or sepia, or Indian ink wash. We find in it some by Giuseppe Galli, probably executed between 1720 and 1730, consisting principally of theatrical decorations and designs for scenes. One of the drawings is probably a design for a monument which was not executed, for in the engraving of it by Pfiffel we find the two inscriptions are omitted. There are also other drawings, somewhat inferior, by his father, Francesco. Of the Galli family (who adopted the name of Bibiena), there were, as in the case of the Fontana family, several members of different generations noted as architects,

* *Architectural Drawings and Sketches*, by G. P. Panini; G. G. Bibiena; F. G. Bibiena; G. G. Servandoni; G. M. Oppenord; P. Neefs; I. Moucheron; B. Cellini; V. é; C. de Wailly; J. B. or P. De La Fosse; J. A. Gabriel; P. Puget; M. Tesi; E. L. Boullée; J. Bénard; D. Louis; R. Palaggi; P. E. Speeth; C. Schut; and others, *circa* 1780.

and more particularly as designers of "prospettive" of theatrical scenery and arrangements.

There is also a pen-and-ink drawing [fig. 3], of about the same date, by Oppenord, who was a pupil of Mansart, and the architect, amongst other work, of the transepts of St. Sulpice. He has been described by Mr. W. H. Ward as an author of "wild designs"—a phrase which we may probably think justified by the fact that it was he who, about 1715, introduced the "style rocaille," resulting in his being called the "père du genre rocaille." We have a drawing, however, which shows him in his more quiet and restrained manner.

We find some good drawings of a scenic and barocco design by Panini [fig. 4], known as a

FIG. 4.—VIEW OF COURT: PANINI.

painter of the Campagna and of Roman ruins, by whom the Institute possesses an oil painting of the Colosseum on its walls in the Council Room.

By Pierre Puget, who was not only an architect, and a "great sculptor" (as he is termed by Mr. W. H. Ward), but a painter also, and was, on these three qualifications, called by his flattering admirers in his own day the "Michelangelo of France," there are also some examples. Amongst these is a sketch for alternative treatments of an archway. This "universal genius," during his stay in England, designed Walpole House, in Bloomsbury, on the site on which the British Museum now stands.

By Desprès is an important drawing in water-colour of the Celebration of High Mass, more noteworthy, perhaps, for its figures and accessories than for its architecture, and executed evidently about the middle of the seventeenth century.

FIG. 5.—SKETCH FOR CANDELABRUM. ATTRIBUTED TO BENVENUTO CELLINI.

There are several designs for ceilings, painted with perspectived columns and balconies in the manner of the time. These are all by unknown hands.

There is a drawing of a Candelabrum in brown ink [fig. 5], on the margin of which is written: "Ascribed to Benvenuto Cellini," but I think we may leave the ascription without further discussion.

By Schut, of Antwerp, a pupil of Rubens, is a heavy and uninspired drawing of an altar, and columned altar-piece.

Another anonymous drawing [fig. 6] is a rather fine conception of an approach to a palace.

The last illustration in the book, and the one engraving, is the prize design for a competition in Lyons in 1784 by Henri Marlet, which, perhaps, points to an early ownership of the volume.

John Talman, son of the elder Talman, who designed Chatsworth for the first Duke of Devonshire, was an architect of considerable note in the early part of the eighteenth century. As a volume of his sketches and plans* shows, he carried out, amongst others, houses for Lord Carlisle and a house for "Ye Lord Devonshire at Lambs' Conduit Fields." Before practising, he travelled to Rome with W. Kent, and in the present volume the outline views of the Rhine, the Danube, and the Wael bear his initials. It also contains some drawings in brown ink of stained glass in the church at Upton [fig. 7], the draughtsmanship of which shows a curiously good feeling for such work, considering the period (1708) of its execution. The Englishman, after his grand tour especially, was even then somewhat "Italianate," and the notes on these drawings are written in a curious mixture of ordinary Italian with English heraldic terms. There is not much doubt, however, that these sketches were not drawn by Talman himself. It is probable that the coloured designs at the end of the book for interior decoration, largely in marble and relief plaster, are from his hand.

In a folio volume of drawings of Whitehall Palace, an early owner, the Rev. George Mortimer, has inserted the following note: "We have always been given to understand that these are the original drawings of Whitehall Palace." The book, however, contains manifestly the drawings made for Kent's

* Talman (J.), *Architectural Drawings with Sketches on the Rhine, Danube, and Wael, and of the stained glass in Upton Church, &c.* 1698.

edition of the works of Inigo Jones (1727) by Flitcroft,* who was not only an accomplished and delicate draughtsman, as these pencil drawings show, but an architect of note in his day. It was he (and not Hawksmoor to whom it is usually assigned) who was the designer of St. Giles-in-the-Fields. He was buried at Teddington, where the inscription on his tombstone refers to him, after a somewhat earlier custom, as "Master Mason."

The original drawings of R. Wood's "Ruins of Palmyra" and "Ruins of Balbec or Heliopolis"† are contained in two large volumes of very laboriously careful sketches. These were not drawn by Dawkins, Wood's partner, as has been suggested, principally, I imagine, because one of the volumes contains, as a kind of frontispiece, a copy of a portrait of Dawkins

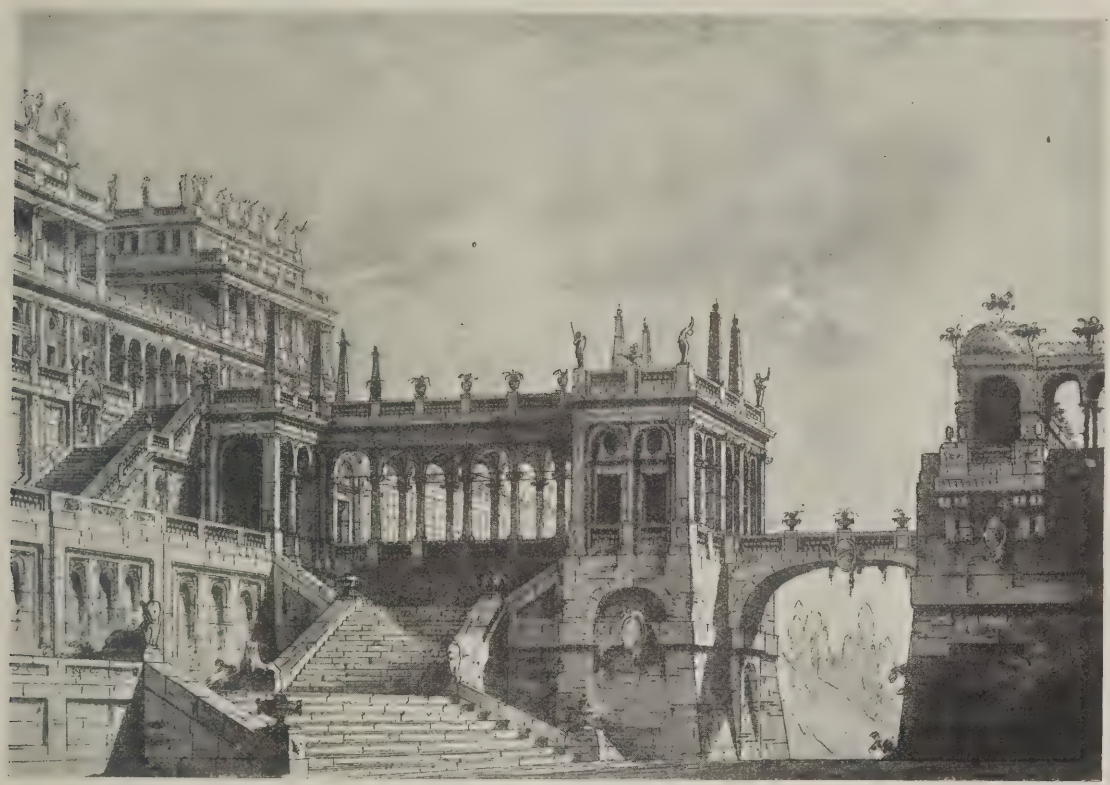

FIG. 6.—ARCHITECTURAL COMPOSITION.

by McArdell, mezzotinted by Hamilton. The engraving ascribes to Dawkins the great discovery of the site of Palmyra. The drawings, elaborated from Dawkins' rougher sketches, by J. P. Borra, are as we know them in Wood's volumes. The latter, who refers in the Balbec volume to Dawkins as having "made the sketches and measures" for the work, in a somewhat rotund if not fulsome manner, expresses his thanks thus:—"To join Mr. Dawkins' name with mine (when I must still continue to be the sole gainer) is, I fear, little less than impertinent, but it is the impertinence of gratitude, which, like love, is never more awkward in its declaration than when it is most sincere and in earnest." Though Dawkins seems to have done the lion's share, if not the whole, of the drawings, this turgid sentence is the only way in which Wood carries out his promise to associate his colleague's name with the work.

* Flitcroft (H.), *Drawings after the designs of I. Jones for the Palace at Whitehall.*

† Wood (R.), *Ruins of Palmyra, otherwise Tedmor in the Desart*, 1753; *Ruins of Balbec, otherwise Heliopolis, in Cœlo-Syria*, 1757.

There is a volume of sketches by Chambers and Yenn,* the latter of whom was Sir William's pupil, and became an architect of some distinction and an R.A. The drawings consist of "designs for fronts, projects for staircases in the grand manner, garden-houses," &c., but, being unsigned, it is not possible to ascribe the drawings to either of the two artists.

FIG. 7.—STAINED GLASS, UPTON CHURCH. JOHN TALMAN.

In 1784, George Hadfield received the Gold Medal, and in 1790, the travelling studentship of the Royal Academy. He made use of his tour abroad to make measurements, and collect data for the restoration of the Temple of Fortune at Palestrina, or Prænestе, near Rome. He

* Chambers (Sir W.) and Yenn (J.), *Architectural Sketches.*

associated with himself in the work Sig. Colonna, evidently a member of the family of the former owners of the Palazzo Colonna—that mountain fastness formed out of a corner of this huge building, and in the possession, since the seventeenth century, of the Barberini family. The restoration scheme is shown in six beautifully tinted drawings,* one of which, full of minute detail, is no less than eight feet long. Indeed, they are all of too great a size, and too full of small and intricate work to allow justice to be done to them on a slide. There is, however, one drawn on a rather bolder scale—the front of the modern palace, which stands just below the site of the ancient Temple of Fortune.

It is interesting to know, by the by, that Hadfield may be further remembered as the architect of a considerable portion of the Capitol of Washington.

The Library possesses the original water-colour drawings by James Stuart† from which the engravings were made for Stuart and Revett's "Antiquities of Athens," and also a small volume of his sketches and MS. notes.‡ The latter probably covers some of the ground of Stuart's visit, *viâ* Holland, to Rome in 1742, and contains fifty-five pages of sketches, in many cases landscapes, drawn, with some breadth and appreciation, in pen-and-ink. There are several sketches of the Pisani villa and gardens, and I give, as an illustration of Stuart's method of making his note-book memoranda, his little drawing of San Bernardino, Verona [fig. 8]. The manuscript notes let one a good deal into the interesting personality of the man, and of his attitude to art. It begins with "a chronology to see the relation of time in which the good

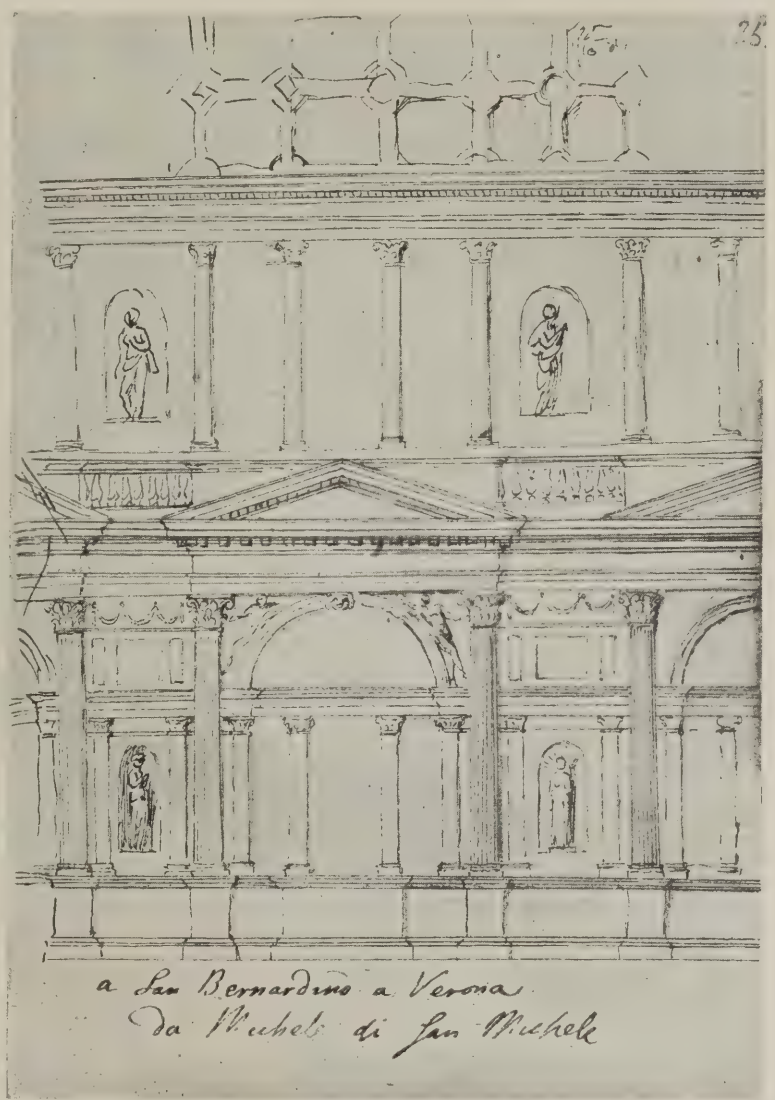

FIG. 8.—SAN BERNARDINO, VERONA. JAMES STUART.

* *Præneste: Views of the City and Remains: Ground Plan and Proposed Restoration of Temple.* 6 sheets. G. Hadfield and . . . Colonna, 1791.

† Stuart (J.), *Sundry Sketches in Greece.*

‡ Stuart (J.), *Sketch-book.*

colourists lived, to see how they might be obliged to one another,'' and the ground covered by his list is from Titian to Spagnoletti. His notes are entirely about painting, and deal very largely with the colour side and theory of the art. His spelling, and indeed his grammar, show individuality, if not eccentricity, and he deals hard knocks to the future critics of what he calls his '' filosophy,'' to whom he refers as '' our modern professors whose ignorance and self-sufficiency will be alarmed at the attempt, and who will not fail to treat as a pedant and a dreamer whoever shall talk of their art in a manner they do not understand.'' Amongst the many little treatises which he began and never finished is one dealing with '' The Laws of Opake Objects,'' and of '' Shaggy or Downy Objects.''

The large drawings, which, as I have said, were engraved for '' The Antiquities,'' are twenty in number, and are executed in water-colour with a somewhat too liberal use of body

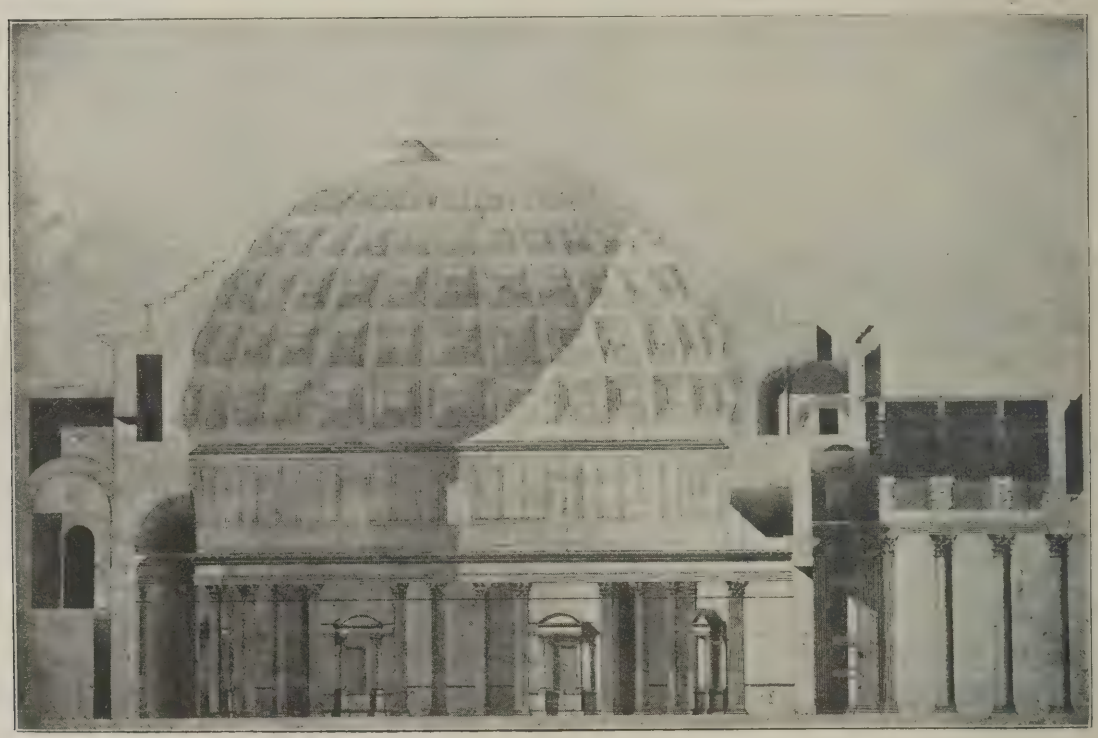

Fig. 9.—Section of the Pantheon. T. Hardwick.

white which has in many cases changed sadly in colour, and, in others, shows a tendency to flake off. We have hanging on the walls four of these—the '' General View of Athens from the Aqueduct of Hadrian,'' which forms the frontispiece of the first volume, a '' General View of the Acropolis,'' the '' Erechtheum,'' and the '' Temple of Theseus.'' The engraving work has been excellently carried out by Walker and Lepinière, and with much faithfulness to the originals. The latter engraver, however, has allowed himself the license of improving in his plate the composition by the introduction, in one or two cases, of accessory figures, as reference to the book will show. The introduced figure in the engraving may perhaps be taken as that of Stuart's partner, Revett, claiming an equal right to be introduced into the view. They are both also represented in their Eastern costume in the view of the '' Incantada,'' vol. 3, ch. ix. p. 1.

There are in the Library nine large drawings by Hardwick—plans, elevations, and sections

of the Pantheon from his own measurements.* Of these [fig. 9], I show one on the wall, and another as a slide. Another large volume by him is a scrap-book in which have been mounted sketches and measured drawings, most of which he made in 1778. These include several sheets of the west end of St. Peter's, the Colosseum, the Villa Madama, and "a plan composed by M. Le Gay." The latter, an architect of note (whose name should have more rightly been given as Le Geay), left France for Berlin in the middle of the eighteenth century, where he found his royal patron a difficult and impulsive client. Indeed, his precipitate departure from Berlin was due to the fact that the King, insisting on a window opening down to the floor as the only door to the Palace, met the architect's natural objection with a burst of anger, and lifted his cane threateningly. Le Geay instinctively placed his hand on his sword-hilt—an act of daring which made him think it wise to leave Berlin for his native country very abruptly indeed. This conscientious, but not very inspired, book is the work of the father of the better-known Philip Hardwick. He was a pupil of Chambers, and obtained, in 1768, the first silver medal offered at the Royal Academy for the class of architecture. His best-known London work is the Parish Church of St. Marylebone, and he also did some not very satisfactory alterations to Inigo Jones' St. Paul's, Covent Garden. Perhaps one of his claims to fame is that J. M. W. Turner was at one time in his office.

To those who are interested in the work of the late eighteenth century, when the influence of the Adam brothers was supreme, the book of sketches of ornamental friezes from original models in the possession of Joseph Rose will appeal.† The Rose family were engaged in the execution of plaster enrichments, for which they made the models from the designs of Wyatt, Stuart, and the two Adams [fig. 10]. The drawings, 330 in number, were executed by Joseph Rose, the son, and the artist member of the firm, in 1782.

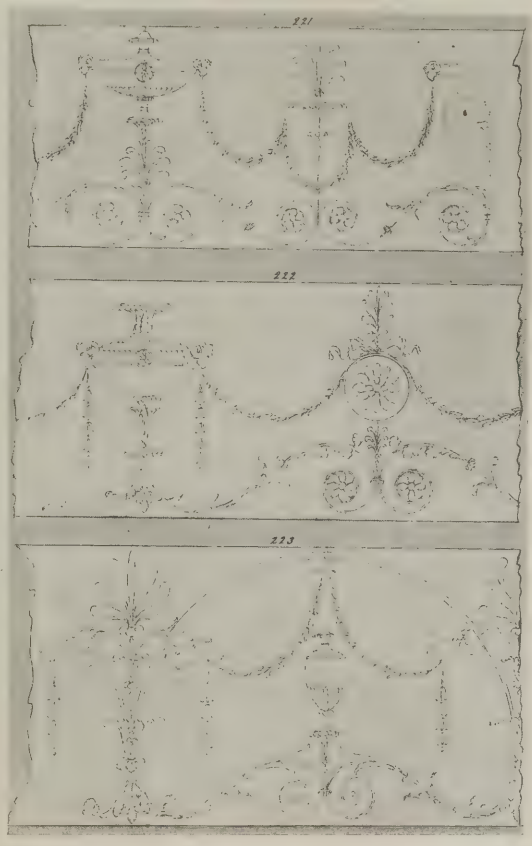

FIG. 10.—PLASTER FRIEZES. JOSEPH ROSE (AFTER J. ADAM).

By Sir Robert Smirke (of whom, as you know, we possess a bust, which is in the Common Room), we have eleven large water-colour drawings,‡ executed during his travels in Naples, Sicily, and Greece, between 1801 and 1805. These include a good drawing of the Temple at Ægina, labelled as the Temple of Zeus, but now identified as the Temple of Aphaia. The Athens drawings are of interest as giving us the original state of the remains before the clearance away of the added and obstructing buildings. I also show his drawing of the Temple of Zeus, Athens.

* Hardwick (T.), *Original Drawings of Buildings in Italy.*

† Rose (J.), *Sketches of Ornamental Friezes, from the original models in his possession*, 1782.

‡ *Greece, Architectural Views and Sheet Drawings*, by Sir R. Smirke.

There is a volume by Henry Parke,* an architect of the early nineteenth century, whose name should be known to members of the Institute as the designer of the medal which was given by his brother-architects, in 1835, to Sir John Soane, and the use of which is allowed us annually for the Soane Medallion. Parke's widow presented these 500 and 600 drawings, which are the result of his tour through Italy, Sicily, Greece, and—a somewhat rarer place to visit in his days than in ours—Egypt, in 1824. Many of his measured drawings were done in conjunction with his fellow-architect, Scoles, of whom there is a framed portrait on our walls. Parke was not, on the whole, a very good artist, and his two smaller sketch-books are mainly

FIG. 11.—SECTION OF ST. PETER'S, ROME. J. GOLDICUTT.

rough notes. One of the large volumes is mainly occupied with sketches, principally pencil memoranda, of his Sicilian journey, and contains a number of drawings of St. Philip Neri, at Palermo. The other volume, which is almost entirely confined to measured work in Egypt, contains a series of extremely interesting plans and sketches, drawn with great delicacy to a small scale, of some of the rock-cut temples of the Nile. He measured carefully, for instance, Amada, in Nubia, Gebel-el-Silsileh, and Dakka, and the curious Egyptian temple at Wady Feryg, with its early Christian fresco of the youthful Christ with a halo. The present slide is from his drawing of Gerf Husen. There is also by him a collection of

* Parke (H.), *Drawings of Buildings principally in Italy and Egypt*, 2 vols. fo., 1821–4; *Sketch-book with Architectural Measurements made in Sicily*, 1822; *Sketch-book with Architectural Measurements in Italy*, 1822.

loose drawings, measured details of Peruzzi's Palazzo Massimi. These were evidently intended for publication, but are in an unfinished state.

One of the original founders of the Institute was John Goldicutt, who was born in 1793, and died in 1842. By him we possess about 300 sketches, and 100 designs and projects of his own.* Many of the sketches are of Pompeian decorative work, probably done for his *Specimens of Ancient Decorations from Pompeii*, published in 1825. They have considerable merit, but are scarcely equal to those of Roos, to which I shall allude later. We have on the walls of the Institute one of his drawings of unusual interest [fig. 11]. It is the very elaborate transverse section of St. Peter's, showing, with much careful expression, the decorations and paintings, and was submitted by Goldicutt to Pius VII. The Pope, in recognition of its

FIG. 12.—THE TREASURY OF ATREUS. J. WOODS.

merit, presented the artist with a special gold medal. The drawing was exhibited at the Royal Academy in the following year. I venture to think that a little gold slip attached to the frame might commemorate the unusual distinction conferred on the picture.

There is a volume of strongly coloured drawings by George Wightwick (1802-1872), an extraordinarily voluminous author on things architectural. They are the originals of his *Select Views of the Roman Antiquities*, lithographed by T. N. Baynes, and published in 1827, and are useful in showing us the unexcavated state of the Colosseum and the Forum. Another volume of his is a scrap-book of sketches, many of which are measured work done in Italy.

We have a further volume to which Wightwick gives the somewhat imposing title of *My Liber Veritatis*.† It contains drawings of vases, and sketches in France and Venice and also

* Goldicutt (J.), *Architectural Drawings and Sketches.*

† Wightwick (G.), *Sketches in Italy: My Liber Veritatis* 1825-6.

the rough sketches for the above work; and, finally, this most prolific of architectural draughtsmen has left behind him a huge collection of large and very vigorously coloured drawings which had served to illustrate his many lectures.

A volume,* presented by Professor Donaldson in 1864, contains some water-colour sketches, done between the years 1816 and 1819, by Joseph Woods, who, it is interesting to note, was a founder, in 1806, of the London Architectural Society, of which our Institute is the lineal descendant. The drawings are not very good, but those of the Treasury of Atreus [fig. 12] and the Lion Gate at Mycenæ are interesting as showing us the buildings before their exhumation.

FIG. 13.—THE TOMB OF THEODORIC. J. L. WOLFE.

A curious series of sketch and note books—no less than sixteen volumes of closely written and minutely drawn notes—are the result of John Wolfe's three or four years of travel in Italy, Greece, and France in 1820 [fig. 13]. It was during this tour that he and Charles Barry became fellow-travellers, and began the intimate friendship which lasted through their life and is perpetuated in the name borne by Sir Charles Barry's son—our distinguished Honorary Associate, Sir John Wolfe Barry. Wolfe seems to have had a veritable itch for writing, and not only recorded his impressions of a day's study of a church or palace but often did not disdain to put down in his minute and careful handwriting his conversations at the inn, and, Englishman-like, his dispute with the landlord glad of an opportunity of overcharging a "Goddam." He was a most thorough traveller, and began his books with accounts of the buildings he wished to see and study, tables of coinages and mileages, mensuration formulæ, and lists of eminent artists, dates, &c. Out of the sixteen volumes he is content to give to England only one—the smallest and poorest—and in the whole of France no appeal, or virtually none, was made to him by Gothic work. Bishop Barry, in the life of his father, makes much use of Wolfe's notes. I should add that the Library also contains two of the latter's large scrap-books, principally measured work, of Italian churches and palaces, showing his usual industry and thoroughness, and well worthy of being indexed for the student's use.

Of Elmes' work, we have a large collection of drawings and designs, and full-size and other details. There are, mostly drawn by his own hand, several interesting alternative

* Woods (J.), *Twenty-eight Original Drawings in France, Italy, and Asia Minor*, 1816–19.

FIG., 14.—PROPOSED ASSIZE COURTS FOR LIVERPOOL: H. L. ELMES.

treatments of St. George's Hall, both interior and exterior.* Amongst these was a rough perspective sketch [see *headpiece*], a fac-simile of which appeared in the *Architectural Review* of last month. I sent a tracing of this sketch to that journal, which has taken so important a part in the debate upon the proposed treatment of the south end of the building, as rather valuable evidence that Elmes himself had entertained and finally abandoned the intention of finishing each end of the podium wall with a monumental pedestal bearing a horsed figure. Amongst his drawings are three large tinted perspectives (submitted in two cases in competition), but two of these, I think, evidently show the hand of Thomas Allom, whose vogue as a "perspective colourist" was so great in the middle of the last century. I take it that this is Elmes' competitive design submitted for the Liverpool Assize Courts [fig. 14]. The same building also reappears in another drawing which is most likely by Allom. The interior treatment of St. George's Hall was the subject of much thought, finding expression in many sketches.

The name of T. L. Donaldson seems to carry us very far back, for, though he only died three years before Nesfield, we have two volumes of sketches done in Greece and Rome as early as 1819 and 1821. Curiously enough, one of these is a large volume of sketches of Gothic work, to which one would not have imagined he had much leaning. The list of the works of Donaldson in our library is, I think, longer than that of any other architectural author. He runs things very close with Vitruvius, the many editions of whose works I have already referred to.

A donation to the Library by Mr. C. E. Sayer, made some three or four years ago, was a volume by Alexander Roos, a German architect who was brought by Beresford Hope to England. It contains many beautifully-executed little drawings of coloured decoration. Some forty or fifty of these are of Pompeian walls and ceilings, but, unfortunately, a large proportion of the remainder are without any indication as to their source. It is interesting to compare the drawings of Roos of a given subject with those by Nicolini and Zahn, and to see how wide a difference there is in its treatment by each of these three authorities.

Decimus Burton, the architect of the Wellington Arch, and a former Vice-President of the Institute, presented to the Library the year before he died (which was as recently as 1881), forty-two drawings of classic relief ornament, stone or marble, carved decoration of architraves, strings, &c. They are drawn, and well drawn, on tinted paper in black crayon touched with white [fig. 15].

By William Burges we have three scrap-books in which have been inserted drawings of original designs of stonework and of silver and goldsmith's work, domestic and ecclesiastic. The first of these contains several designs of fonts, with their prices attached, all of which, by the by, seem, in the light of present-day estimates, to be distinctly moderate. I rather imagine this to be pot-boiling work done in his earlier days for some firm. The book begins with a beautiful design for an inlaid floor, evidently of a mortuary chapel, as may be deduced from the construction and the *motif* of the design. It was evidently to be executed in either black and white marble, or white marble with incised ornament filled in with black impasto, and, in any case, is very suggestive of the inlaid work at Siena Cathedral by Beccafumi and other artists of his time. The books dealing with goldsmiths' work contain designs of book-clasps and metal bindings, the mounted glass bottle, and a drawing of the equally well-known cup with the twenty-four grotesque animals on the rim. These books were purchased in 1882. They hardly bear out the charge of "fondness for mummery and posing" which Professor Blomfield, in his Royal Academy lectures to which I have already referred, told us had robbed Burges of the opportunity of being considered "a fine draughtsman." A later

* Elmes (H. L.), *Liverpool: St. George's Hall, first design: plans, sections, elevations*, 1839; *Assize Courts: plans, elevations* (unfinished).

acquisition, through the generosity of Sir Wm. Emerson, is the pocket-book lately presented by him to the Institute. It consists of thirty-six vellum pages with sketches in brown ink, annotated in Burges' usual almost black-letter script, and still contains, interestingly enough, his own crowquill. The contents are most miscellaneous—animals, landscape notes in Italy, sketches at the theatre, and studies for portions of his own designs. There is an alternative design for the upper part of the tower for his proposed Law Courts, introducing, as features of the carved decoration, in his characteristic manner, the seasons, months, and planets.

There are four volumes* of a modern architect whose influence on the architecture of our own time has, in the opinion of many, not yet been fully recognised. Some of the evidences of the amazing fertility known to many who, like myself, were brought into close contact with William Eden Nesfield are to be found in the four volumes of his sketches which the Institute possesses. One of these volumes—a scrap-book—gives an opportunity of tracing the development of his talent by sketches dating from 1846, when he was only eleven years old. It contains boyish drawings, eventually improving in merit as he profited by the teaching of J. D. Harding, many of whose characteristic strokes are to be noticed as corrections of his pupil's

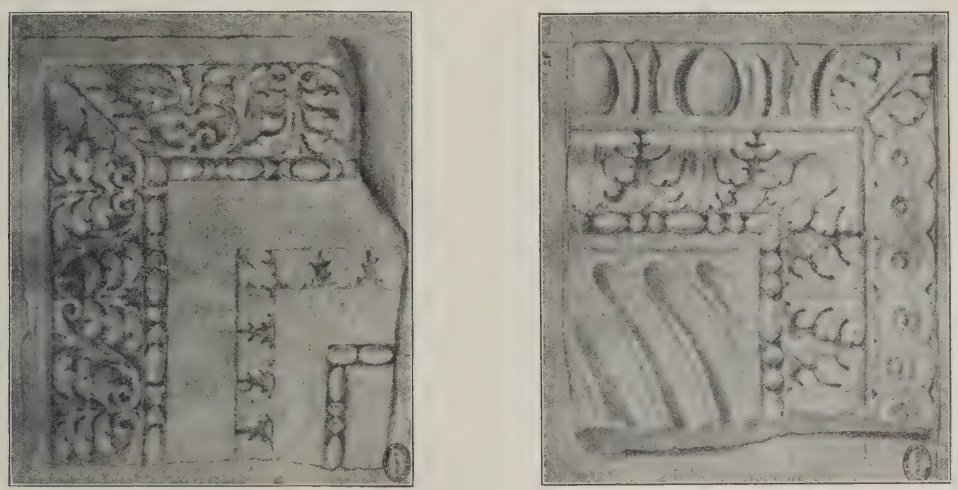

Fig. 15.—Relief Ornament: Decimus Burton.

work. The slide I show is from a water-colour drawing done when Nesfield was an Eton boy of sixteen. Later there are evidences that he had begun the study of architecture in Burn's office in the shape of his drawings of the Orders, which one does not imagine he found a very congenial task. Another volume has rougher notes, and some water-colour sketches. His visit to Athens and Constantinople does not, as witnessed by this book, seem to have made much appeal to him. His sketches made there are slight and few in number, though in another volume we find the Parthenon and the Propylæa. The third volume contains many English subjects, dating apparently from 1855 to 1858. But the fourth is a book of great interest, being mainly the material eventually utilised for the well-known book *Specimens of Mediæval Architecture in France and Italy*, published in 1862. The illustrations were drawn on the stone by Newman, and, though occasionally just a little hard in draughtsmanship, show the lithographs to be particularly faithful and accurate to the original. The frontispiece to this volume is the design for the celebrated title-page for which Nesfield's friend, Albert Moore, drew the group of "The Centuries Greeting Architecture." There are two

* Nesfield (W. E.), *Specimens of Mediæval Architecture*, 4 vols.

smaller sketch-books * by Nesfield, of which one treats in a hasty and sketchy way of French Gothic work, and was evidently his pocket companion when he made the larger and more careful sketches for his published volume. The other is of great merit and interest. It is confined to English subjects, and contains beautiful notes and sketches of architecture and furniture. My slide shows the beautiful porch of Bampton Church [fig. 16], which may be known to you. There is a light-hearted diary of a five-days' sketching trip he made in 1862 with Mr. Norman Shaw, who I do not think will object to my quoting the following extract bearing upon their stay at the inn at the Devil's Dyke :—

"Left Steyning at 9 a.m., and walked to Bramber. . . . After luncheon walked up the Downs to the Devil's Dyke. It commenced to rain about 4, and we took refuge in the public, yclept Dyke House. Stopped till 9 p.m., and as it continued to pour down we made up our minds to stop at the pub. Jolly landlord, and very chatty after certain amount of brandy and water. I slept on a sofa, having tossed up with Shaw who was to sleep in the bed—and *I* lost the bed."

All of the drawings of R. J. Johnson's *Specimens of French Architecture*, published in 1864, are contained in two of the three volumes † presented by his widow, the remaining volume consisting of sketches of English Gothic work, the execution of which is not on the high level of the French sketches. Amongst the English work is a view of Ely Cathedral. There are 210 French sketches, while the plates in Johnson's book are only 100. They are models of accurate and appreciative draughtsmanship, and represent a great amount of enthusiasm and industry.

In 1867, there were presented, through Professor Donaldson, by Texier himself (a Royal Gold Medallist of the Institute in 1866), five volumes of sketches and details,‡ in gold and colour, of mosques in Constantinople, one volume dealing specially with St. Sophia. To the latter, Professor Lethaby refers in his *Sancta Sophia*.

The volumes of Devey's sketches § are somewhat disappointing. Not indeed that they are otherwise than beautifully drawn and touched with colour in quite a charming way, but that they happen to deal principally with one branch of his sketch material only. The majority of the drawings are of chimney-tops, and though they cover a great deal of ground, and comprise notes made of these throughout England and in Germany and Holland, the volumes are not of very great interest. There are, however, a few sketches of French towns, such as Harfleur, Rouen, &c.

A collection of very beautiful drawings is contained in two volumes, ‖ one of twelve sheets and the other of thirty-three, of the coloured decorations of Norfolk and Suffolk churches. The larger volume deals with the well-known series of screens, and the smaller contains principally roof decoration. These drawings, which were executed by G. Y. Wardle, with very charming feeling for his subjects, show a delicate and an accurate appreciation of the work of that great school of English art of the early sixteenth century which has not yet received its meed of recognition. They show to how high a level this had been carried by the painters of East Anglia. Perhaps some day it may occur to a publisher that here there is material ready to his hand awaiting publication.

In my treatment of the original drawings in our Library, I have considered them in their chronological order, and have included in the review those of men who worked up to our own time. I hope it may be remembered how useful and how entertaining an adjunct to the collection is the evidence such drawings give as to the intimate thought of the artists,

* Nesfield (W. E.), *Two Sketch-books.*

† Johnson (R. J.), *Drawings*, 3 vols.

‡ Texier (C.), *Drawings, Sketches, &c., illustrating his researches in Constantinople, Diarbekir, Ephesus, Tarsus, Anazarba, Bagdad, Nicæa, Ispahan, Schyraz, Assos, Antiphellus, and Mesopotamia* (bound in 5 volumes).

§ Devey (G.), *Sketches*, 3 vols.

‖ Wardle (G. Y.), *Painted Decorations of Churches, chiefly Roofs*, 1870; *Painted Screens in Norfolk and Suffolk*, 1872.

indicating, as it does, in so many instances, the methods by which they prepared themselves for their coming life-work. By the student especially should it be found of much value, and

FIG. 16.—WEST PORCH OF BAMPTON CHURCH: W. E. NESFIELD.

a source of incentive and inspiration. I trust that the appeal made from another quarter to assist a collection on very similar lines may not succeed in stopping the continued growth of

this portion of our Library, and end by leaving it that most dreary of all things—a library that has stopped abruptly short. But I do not think this need necessarily be the case, and I hope that our own and the Victoria and Albert collection of architectural drawings may exist side by side without antagonism, and may each grow and increase unaffected by the competition of rivalry.

It has been to me a very pleasant task to get together the information, such as it is, which I have laid before you as to the possession of property the existence of which I rather think you did not realise, and if I have been able to interest you, I may perhaps best close in the words of old John Shute and say: "I shall think myselfe most happy, and, if not of all persones, yet at the least-wise, of such as be honest esteemers and acceptors of other mennes diligence and studies; The which if it come to passe, both I shal' be glad of my labours in these things bestowed, and for the love of my naturall countrimen be furthermore incouraged hereafter to attempt greater things."

DISCUSSION.

Mr. E. Guy Dawber, *Vice-President*, in the Chair.

Mr. R. PHENE SPIERS, F.S.A. [*F.*].—It is a very great pleasure to me to propose a vote of thanks to Mr. Townsend for his admirable Paper and for the valuable information he has brought forward. I suppose it was suggested that I should propose the vote of thanks because of my knowledge of the Library, and in the expectation that I should be able to add something of interest. But Mr. Townsend has gone beyond me; he has brought out facts concerning a large number of drawings, only a few of which were known to me to be in the possession of the Institute. Three or four years ago Mr. Townsend pressed me to undertake the same task, but I could not see my way to do so; and I am glad that I left it in his hands, because, in the first place, it has given him the greatest interest and delight to go through the collection; and secondly, because he has taken an independent line in regard to some of the works which I have known for years. Mr. Townsend begins with the work of John Shute, published in 1563. I remember that book when it was brought here first by Mr. Wyatt Papworth. I have consulted it very often since, and have induced everybody else to do so. I am glad the book is to be published in facsimile so that it may be in the hands of all students; there is more to be obtained from it in that way than by merely looking at it in the Library and then going through England and inspecting the various buildings which the work has influenced. I have recognised in my trips a great deal of work which has been taken from Shute's book first published in 1563. There was so great a demand for the work soon after its publication that two other editions of it were brought out, one in 1576, and the other in 1584. That shows it must have been in the hands of most building owners afterwards, and probably also of the master masons. Longleat House seems to have been taken very largely from it in detail. For instance, in Shute's Doric Order the mouldings of the pedestal would seem to be his own conception, as I have not been able to trace any resemblance to them in Roman or Italian works. I have seen in England many instances where that moulding is copied, which shows it must have been the model on which those buildings were erected. Another copybook was brought out in 1577 by John Vredeman de Vries of Antwerp, and it became a favourite source. It is now very rare, but I think there is a copy in South Kensington, and another in the British Museum. We have no copy here. There are to be found, however, many engravings from it in a valuable book on Flemish architecture which was presented to us by one of our Corresponding Members, M. Van Ysendyck, of Brussels. De Vries' work influenced greatly Wollaton Hall, which was built three years later. Sir Fr. Willoughby, the builder, must have got hold of it and handed it to his master mason Smithson, who reproduced what is found there. Now that the School at Rome is established, students who are going there should look up Hardwick's book containing his drawings of the Villa Hadrian, which he measured in 1777. They will find it interesting to see how much was known of the Villa in those days, with the view of taking it up themselves in the future. The most interesting drawings Mr. Townsend has referred to are those of George Hadfield, who carried off the Gold Medal of the Academy in 1784, and was appointed Travelling Student in 1790. He went to Palestrina, and measured the building; and this is the only instance I can recollect of a Travelling Student carrying out a series of drawings similar to those of the French students sent out every year. The drawings are shown in the other room, and should be followed carefully. Palestrina, I believe, was measured by Palladio, and we have the drawings upstairs in the Devonshire Collection. Mr. Prestwich, of Liver-

pool, has been sent there to make other measured drawings, and if you compare the works of Hadfield, Palladio, and Huyot, who measured the place in 1811, and of which we have copies in the Library in the *Monuments Historiques*, sufficient difference will be observed between them to make some students desirous of finding out which among them is right. There is still much work to be done in measuring the Villa of Hadrian. Ostia, again, which is being more carefully examined, affords ample subjects for study. As regards Nesfield's drawings, a description of these will be found in the Institute JOURNAL for 1895,* together with an account of his student career, and of his tour as Travelling Student of the Royal Academy. As a matter of fact, at the time he was studying, the Houses of Parliament were being built, and he would go there on Saturday afternoons, and sometimes on Sundays, to draw Pugin's work, with which he was delighted. Later he went to draw various cathedrals, and utilised his time in decorative work more than he had done before. When speaking just now of Hadfield's drawings I ought to have mentioned that they were given by J. W. Papworth, who wrote an admirable description of them. The description is in MS. in the Library, and has never been printed. It is historical and critical, and should certainly find place somewhere in our Transactions. The drawings were given by Papworth in 1848, and he got them from Sir James Wright, his client. Reference has been made to the South Kensington collection. I think it right to point out that when I started the collection of drawings there we were not in possession of these premises, and it would have been very difficult to find room for them at the Institute. We have now 1200 at Kensington, and they are all catalogued and placed in drawers, &c. We have not the space here for so large a collection, and the attention of the Council should be drawn to this fact, for if you want drawings offered you must find places for them ; they must be properly stored and catalogued, so as to be accessible to students. Mr. Townsend's paper must have taken an immense deal of time and study to prepare, and we feel deeply indebted to him. The collection of drawings he has got together is of very great value, and the paper when published will be of enormous benefit to students ; I hope they will take advantage of what they have learned, and come and inspect our drawings and books. There is also much to be learnt by going through some of the early Papers, those which are not printed. Some years ago I found that we possessed a Paper in MS. which was read by Sir Henry Layard in 1846, and I published this with some of Sir Henry Layard's drawings as an appendix to my paper on Sassanian Architecture.† I worked the subject up, and was given the sketches which were made by Sir Henry Layard when he was at Hadhr. On the back of the sheet is a drawing, rather imaginary, because he assumed three floors, whereas there was only one story. Sir Henry Layard's original drawings are in the Library.

Mr. E. F. STRANGE, Assistant Keeper Victoria and Albert Museum : I have very great pleasure indeed in seconding the vote of thanks. As Mr. Townsend remarked towards the end of his Paper, the collection to which he has drawn attention is, to some extent, on the same lines as that at South Kensington, which is at present in my charge. I say " to some extent " because nothing during the course of Mr. Townsend's paper has interested me more than the way in which he touches on various subjects also represented in the collection at South Kensington, which I hope is now rapidly becoming of very much more than even national importance. At this late hour one can hardly take up the many interesting points which Mr. Townsend has raised, of attribution, of dates, and things of that sort ; but two things I noted which were of interest more perhaps to me than to you. One is the reference to John Yenn, who worked with Chambers. If Mr. Townsend will be good enough to pay us a visit to South Kensington, I think he can clear up that difficulty, because last year we were fortunate enough to acquire a considerable number of drawings by John Yenn, chiefly for furniture and decoration, which are rather copiously signed by him. Yenn, who towards the end of his life was Treasurer of the Royal Academy, designed a large amount of furniture. He seems to have got into the Academy on the strength of his general practice ; as far as I can ascertain, he never built anything of importance, but he erected a great many villas and buildings of that sort. Certainly, he designed much furniture, and a great deal of decoration which has been attributed to other and much better known names. For instance, the signature on some of the South Kensington drawings is attached to things which were done for Windsor Castle, with which his name has not hitherto been associated. The other was with reference to the East Anglian rood screens, and drawings of Wardle which you have in the next room. I do not know how you got them, and I should very much like to know ! It would be a reflection upon myself and on the Staff of my Department if I were to suggest that you had no right to them ; but it is an interesting point that we also have a considerable number of those delightful drawings by Wardle, which he was commissioned by the old Museum to make in 1865, 1866, and 1867. Apparently he went on for his own pleasure and made some more, which are now in your possession ; and if at any time you feel inclined to be generous and transfer them to us we shall appreciate it ! That question of decoration in the early sixteenth century is a rather important one, and I am glad it

* " William Eden Nesfield's Drawings," by R. Phené Spiers, F.S.A., JOURNAL R.I.B.A., 22nd August 1895.

† TRANSACTIONS R.I.B.A. (1890–91), Vol. VII. N.S., p. 69.

has been mentioned to-night. From time to time I have tried to draw attention to it systematically in my small way; during the last few years we have at South Kensington encouraged people to make very careful drawings of painted rood-screens which up to that date were not in the collection. In that way the collection has been steadily increased. Mr. Townsend referred, as did also Mr. Spiers, to what Mr. Townsend rather strongly called the possible competition and rivalry between the collections which you have at the Institute and those at South Kensington. I do not think the Institute need trouble. We do not desire to rival or to compete with anybody; but I am afraid it is our plain duty to go on accepting everything that our good friends offer us which is good enough for us to accept; and to go into the market and buy everything that in our judgment we should buy and which we are advised should be bought. You see, we have the interests of the public to consider. We have a staff there—not a large staff, but it is something; and we have accommodation. As Mr. Spiers has already pointed out, our drawings are catalogued; and they are not merely catalogued, but every one of them is topographically indexed, which is of very much more importance to the student. Our topographical index at the present moment contains something over 40,000 references; and we can do for you in the matter of architectural drawings far more than you would be able to do for yourselves, even if you were to spend as much money on your collections as we spend on ours. It is to the highest degree creditable to the Institute which is at the head of this great profession that it should possess a valuable and important Library; and although I am only a guest, I hope I may be forgiven if I say that your collection would be very much more important and more valuable if that had been realised earlier, as I hope it is going to be realised now. The opportunities of collecting old drawings of architecture and ornament are very quickly passing away, and within a few years it will be almost impossible, except on very rare occasions, to go into the market and buy them. I do not suppose the Institute will be able to compete with us in a matter of that kind. Still, there is the point that you must not grudge the public those drawings that some of your kind friends take the trouble to collect and give to us. They are your drawings all the time, and the only thing which results from their being put in South Kensington is that you have to share the use of them with other people. I am sure Mr. Townsend's paper will not only be of the greatest value to the members and students of this Institute, but also to those very many other people who will read it in your JOURNAL, and will therefore desire to have further information as to the contents of your Library. And as one of those outsiders, I sincerely hope it will be possible for the Institute to afford some facilities to students in that respect.

MR. RUDOLF DIRCKS, *Librarian*. — Mr. Townsend has dealt with the pick of our original drawings, and dealt with them so thoroughly that there is little left to be said except to congratulate him on his review of them. I shall not attempt at this time of night to add to his list, because he has pretty well covered the ground if he has not covered the whole ground. One of the most interesting of his criticisms was his identification of the drawing of the proscenium for the Queen's Masque of Indiands with a contemporary descriptive passage which confirms the view that the drawing is by Inigo Jones. We had no doubt about this before, but it is pleasant to have such a definite confirmation. Mr. Townsend has referred to the architects who build castles in Spain. The most interesting volume of original drawings from this point of view is the considerable collection to which he referred containing the work of Bibiena, Panini, Puget, and others. The designs of the Bibiena family and of some of the other artists were devised in most cases either for stage scenery or for the decoration for some court festival or pageant. The Library is fortunate, I think, in possessing an original drawing by Puget. The universality of Puget's genius, in its most serious aspect perhaps, has been appreciated by many of us who have seen his works of sculpture in the galleries of the Louvre, whatever may be the general opinion with regard to his work as an architect. With regard to the Talman drawings to which Mr. Townsend referred, it is interesting to recall that this architect had the charge of the erection of Hampton Court Palace under Wren, and that his plans in the volume are well known to historians of the building. The original drawings for the triumphal arches for the entry into London of Charles after his coronation (it should be coronation, not restoration, I think) form part of the Burlington-Devonshire Collection, and it was at Mr. Crace's suggestion that I compared these drawings with the engravings in the British Museum, with which they correspond, and of which they are, I found, the originals. Later investigation by Mr. Keith, the Assistant Librarian, goes to show that the arches were unquestionably designed by Gerbier. The evidence on this point is unmistakable. The Palestrina drawings which were exhibited a couple of years ago in the Library aroused the interest of Dr. Ashby, the Director of the British School at Rome, and these, together with Goldicutt's view of the interior of St. Peter's, formed part of the Institute's contribution to the exhibits at the International Exhibition held at Rome last year. In this connection it is interesting to note that the small exhibitions of drawings and engravings which have been held in recent years in the Library have occasioned many requests for loans for exhibition purposes, and that, with the permission of the Council, drawings or engravings have been on show

at Manchester, Liverpool, and at the Art Gallery at Whitechapel, as well as at various International Exhibitions. Apart from original drawings, the Library contains many independent engravings, or volumes of engravings, and prints of considerable value. I need only mention in this connection the *Liber Veritatis* of Claude, and the volumes of Piranesi, although there are, of course, many others. There is little reason to fear that this department of the Library will come to a standstill ; there is, indeed, on the contrary, every reason to fear that the collection will outgrow our space. Within the last few weeks, for instance, the Institute has, through the good offices of Mr. George Macmillan and Mr. Theodore Fyfe, received from the Dilettanti Society an important gift consisting of the original drawings made for the Society's volume of Ionian Antiquities. Miss Lynam, the niece of the late Mr. T. M. Rickman, has further presented a collection of drawings which contain much of the original work of the elder Rickman, the author of the *Styles of Gothic Architecture*. In addition to the drawings the Library also possesses a considerable collection of photographs, which have been increased by Mrs. Cates' recent handsome gift of over eleven hundred photographs of architectural subjects collected by Mr. Cates on his Continental travels. So it will be seen that, so far from remaining stationary, our collection is in a healthy state of growth. Mr. Townsend, in his opening remarks, referred to the collection of books, and I agree with him that the Library does not contain a large number of works which would appeal to the collector or the bibliophile who is not an architect ; but to the bibliophile who is also an architect—and he is not a stranger to the Library—there are but few shelves which would not yield something of interest, even of bibliographic value. The accumulation of rare editions is beyond the finances of the Library at present ; in the course of time perhaps some liberal benefactor may endow the Library, as in the case of one or two other institutions, with a sufficient sum to enable the Committee responsible for the purchase of books to deal more adequately with this aspect of the collection. I am sure that we are all grateful to Mr. Townsend for his most excellent paper, which has certainly occasioned him as much pleasure in the writing as it has given us pleasure in the hearing of it.

Mr. W. H. WARD, M.A. Cantab. [*A.*].—I have listened with much pleasure to Mr. Townsend's Paper, which is full of valuable criticism. He has done us great service in bringing to our notice the wealth of our possessions, which perhaps many of us were not conscious of, and I feel he may have rendered us indirectly another service in calling our attention to the wealth, if I may put it so, of things which we have not got. We have a great many treasures, and he has dwelt upon one line, that of drawings ; and one might, if it were not so late, point to a great many other treasures in the way of illustrated books, especially those with engraved illustrations. But if we were to take up the line of books of that kind which we do not possess, a horrible tale might be unfolded. There are many dreadful lacunæ which should not exist in a Library like ours, and it is unfortunate that we cannot fill up those gaps. I feel that Mr. Townsend will have done great service indirectly if he can get sent up to those august regions where the finances of the Institute are managed, some idea of the needs of the Library. One may, perhaps, compare our finances with that which other libraries of a similar nature dispose of. We will not compare ourselves with the Columbia University Library, New York, which I believe has unlimited funds to draw on ; I am not exaggerating, I think, when I say it has been known to spend over £1,000 in books in one year. The very thought of it makes one's mouth water. But we ought to be able to dispose of as much for library purposes as, say, the Institution of Civil Engineers, which, I believe, spends something like £600 in books annually, of which nearly half goes towards binding ; and the Institute of Surveyors, which spends about £300. We at the Institute get the magnificent sum of £150. Architectural books are in their nature expensive, and many of the most necessary and expensive works are unbound. Out of our £150 we have to spend at least £40 or more on binding ; and part of the remainder is spent on buying duplicate books for that very important branch of the Library, the Loan Collection. This is of the greatest possible use to students, and they are a large and increasing class. Of our 20,000 books some 800 are in the Loan Library. Many of these latter, however, are out of date, and many are less used now owing to the Examination programme having been altered. Very often some of the books most in demand are booked three or four deep, which means that students have to make frequent journeys here in the hope of getting a book, and in the end, perhaps, fail to get it. If we could have £30 or £40 allocated to buying duplicates of the usually cheaper books required for the Loan Library, and have another sum for binding, and still have our £150 to spend on books for the Reference Library, we should be in a much better position. Mr. Strange has pointed out that to continue our collection of drawings is becoming more and more difficult, and that old architectural drawings are now practically unattainable, or when obtainable are quoted at almost prohibitive prices. That remark applies equally well to old illustrated architectural books. Some of the lacunæ which I mentioned can hardly be filled up now unless some millionaire steps in and helps us, which does not seem very probable. But the more we put it off the more difficult it will become. If Mr. Townsend's Paper will have the effect of giving help to our Library in this matter, he will have done a very great service, and I desire

to associate myself very heartily in the vote of thanks to him for his Paper.

MR. HERBERT BATSFORD.—I have much pleasure in joining in the vote of thanks to Mr. Harrison Townsend for his very interesting and enlightening Paper. I cannot help feeling, however, that the title of the Paper does not express the line that he has taken, and, with all deference, would suggest that it be altered to "Some Drawings in the Institute Library." Mr. Townsend dismisses the books in a few paragraphs, and I feel that he—I am sure unconsciously—somewhat belittles the Library as a collection of books; country and foreign members will not gather from the Paper that the Institute fortunately possesses one of the finest collections of architectural books in the world, including the grandest folios that have been published on the subject. I am sure we all feel that there is room for another Paper telling us something more about the collection of *books*, and may I venture to suggest that it should be compiled by your Librarian, whose knowledge, genial manners, and unfailing courtesy are appreciated by us all? I often feel in looking at these great folios that too little thought is given both to the mighty dead who designed the buildings they illustrate, and to the mighty dead who have produced the volumes themselves. To my mind the Institute Library should be as impressive to an architect as the crypt of St. Paul's or the walls of Westminster Abbey are to the general public. Assuredly, round its walls are the monuments to inspire. In addition, may I suggest that in this further Paper there should be some human interest in the treatment of the books. One would like to hear something about the men who spent years of their lives producing them. It would be invidious to speak of any living author, but let us go back a generation or two and think of men like Cicognara and Letarouilly and their books illustrating the buildings of Venice, the Vatican, and the Renaissance buildings of Rome; of Viollet-le-Duc and César Daly, whose labours must have been unceasing; and of Ferdinand Ongania, a bookseller, who, living under the shadow of St. Mark's, felt there should be a monograph adequately illustrating it, with the result that he spent years of his life upon a record of the monument. I believe I am correct in saying that by the publication of this unparalleled monograph, a copy of which you have in your Library, he lost thousands of pounds, and practically died of a broken heart. Let us think also of Robert and James Adam, who published their *Works in Architecture* as an advertisement. Of course, architects nowadays are not allowed to advertise; when they issue a few of their designs in small volumes, they are only intended for the inspiration of their professional brethren, or the enlightenment of the speculative builder! It makes a publisher's mouth water to think of the days gone by. It is interesting to know that Adam's *Works in Architecture*, issued at a few pounds, to-day in its complete form fetches 100 guineas — hence if advertisements are fine enough, they will be appreciated by posterity! Of course, a great deal could be said about the old French books, such as Blondel's wonderful four volumes, *L'Architecture Française*; but coming to more recent times, let us think of volumes the results of studies by men before they started practice. Let us take, for example, Bowman and Crowther's *Churches of the Middle Ages*, Stuart and Revett's *Antiquities of Athens*, Inwood's *Erechtheum at Athens*, Cockerell's *Temples at Ægina and Bassæ*, Wilkins' *Architecture of Magna Græcia* and translation of Vitruvius. As Professor Beresford Pite reminded me in a recent conversation, Stuart's book was produced before his house No. 15 St. James's Square was built, Inwood's volume before St. Pancras Church, Cockerell's folio inspiring his many fine buildings, and Wilkins' volume before University College or the National Gallery. Assuredly these men learnt to walk before they started to run, and I venture to suggest there is something for some of the younger architectural students to learn from this. In the Paper I am suggesting something could also be told us of the fire, enthusiasm, and imagination of Piranesi, and the magnetic influence he exerted upon those who went to see him during their visits to Rome. It is rather a far cry to the late Mr. Edmund Sharpe, who more than once told my father that he might have ridden in a carriage-and-pair if he had not started writing books on Architecture. The theme is endless, but assuredly fascinating and inspiring. Then I have another suggestion to make. May there not be short Papers upon the architecture of certain countries or periods, with leading books on the subject exhibited, followed by short discussions? I believe there is a large number of young men who would like to have their attention drawn to what is inside some of these magnificent books, and some of your members will, I think, be very glad to tell what they owe to their inspiring influence. Turning to Mr. Townsend's Paper, I have not seen the copy of Shute's book for some time, but I think Mr. Wyatt Papworth, in his notes at the beginning of it, says that there are only two other perfect copies known, and I believe they are both at the Bodleian Library. Then the *Recueil d'Estampes* is generally known as the *Cabinet du Roi*. The twenty-two volumes were published at enormous expense by Louis XIV. to show the wealth of his palaces and of the works of art enshrined there. As to the drawings you possess, I am very glad indeed that you have so many, but, on the other hand, I am sorry that you have not more, because I am convinced that the more these drawings are collected under one roof, the better for all who may want to refer to them. I have experienced

great difficulty in finding what is available scattered through different collections. For instance, when working with Mr. Stratton on the book upon *Tudor Architecture*, we had to go to the Bodleian Library, to the British Museum Library, Print Room, and Manuscript Room, to the Victoria and Albert Museum, and to the Society of Antiquaries' Library, and in some cases we had literally to dig for what we could find. Now these drawings will not become any the easier to get hold of. There are Mr. Spiers and Mr. Strange and other people about, and if you want any drawings you will have to look eagerly after them. I am very much surprised to find one omission from Mr. Townsend's list of drawings. There is no mention of the four volumes of original drawings by the late James K. Colling, made about sixty years ago, illustrating in a most accurate and artistic manner some of the best examples of English Gothic architecture, architectural ornament and colour work. Many of you will be acquainted with the published drawings, which give a poor idea of the beauty of the originals. The circumstances under which these drawings were procured are somewhat interesting and a little personal, so perhaps you will excuse my bringing back your attention to them. Some few years ago I discovered quite accidentally that Mr. Colling, then over eighty years of age, was not in very affluent circumstances. I say "accidentally" because Mr. Colling did not talk of his troubles. I got into communication with Mr. J. Osborne Smith (one of your Fellows), who worked splendidly, with the result that a handsome testimonial was got together for Mr. Colling, and the original drawings which he had taken care of for so many years were handed over to the Institute Library. The Architects' Benevolent Society and the late Mr. T. M. Rickman further interested themselves in Mr. Colling's case, and I am glad to say he was able to end the rest of his days in comfort, free from all financial worries. This shows the value of taking care of good drawings, as they may prove useful in time of need! Then there is a very interesting collection of drawings of English work, chiefly half-timbered, made by Mr. Walter Peart, who, I fancy, was at one time clerk of the works to the late Mr. George Edmund Street. I remember him well as a most modest and retiring man. I always felt that some of his drawings ought to be published, but did not see an opportunity, and now the Institute has them. I have not seen the drawings by Mr. G. Y. Wardle, but there are many by various artists in different collections, and they ought to be published, because they would form a most valuable and beautiful record of the magnificent colour decoration that was, and still remains, in England. Yet to publish them without some subsidy would spell ruin to a publisher. On this subject I might have a good deal to say, but now is not the occasion. Mr. Townsend does not refer to the magnificent collection of paintings of your Past Presidents. They are certainly not drawings, but if this Paper is going to circulate, as undoubtedly it will, all over the world, I think some mention should be made of them. Then there are the fine portraits of Robert and James Adam in your Council Chamber. Of course these are not in the *Library*, but they are exceedingly fine, and are unique. Mr. Townsend does not mention the heirloom copy of Wren's *Parentalia*, which of course is priceless, but I suppose he thinks it was the subject of so recent a Paper that he need not do so. At the same time, this Paper may be circulated where the other was not.

THE CHAIRMAN.—I should like on behalf of the Institute to thank Mr. Spiers for presenting us this evening with a very interesting drawing by the late Sir Henry Layard, which I give into Mr. MacAlister's charge. And I should like to refer to the matter which Mr. Ward mentioned as to the somewhat meagre support which the Council give to the Library Committee. I can assure him that this is a matter of grave concern to the Council, and I hope that shortly, when our finances get on a better footing, we shall be able to help very substantially in this direction, because I can assure you that the Council are well aware that it is necessary above all things to keep up the high standard of the Library. I should like to add my personal thanks to those of the proposer and seconder of this vote for the excellent paper Mr. Townsend has given us. It must have taken him an enormous amount of time and involved much research to collect all this information. No one could have done it better than Mr. Townsend. I feel also, from the way in which he read the Paper, that it has been a labour of love to him. We shall have it in the JOURNAL, but I would suggest it should also be published separately so as to be available for reference. I was greatly impressed by the beauty of the draughtsmanship of the various drawings shown; the wonderful accuracy of perspective, the delicacy of line, and the excellent way in which every detail is brought out make them admirable object lessons. If our younger students study these drawings they will agree that much of the present-day draughtsmanship does not compare at all favourably with that of the men of former generations. I have now only to put the vote of thanks to Mr. Townsend for his delightful paper.

The resolution was carried by acclamation.

MR. TOWNSEND, in acknowledging the vote, said: I have enjoyed very much the getting together of the data and the facts, and I am bound to say that I could not have succeeded so well if it had not been for the very kind and generous assistance given me by Mr. Dircks, the Librarian, and Mr. Keith, our Assistant Librarian. My thanks are also due to Mr. Spiers for his advice and instruction from time to time. It is getting so late that I have only time to mention one thing, and that is to clear the character of the Institute from any shadow of aspersion as to the way in

which certain drawings came into its possession. It struck me, as Mr. Strange was speaking, that perhaps the explanation may be found in the fact that ours are very manifestly tracings. It is an interesting point, and I should like the opportunity of being allowed by the Council to collate our drawings of the Wardle Norfolk screens with those at South Kensington. I have no doubt we should find that someone has presented us with tracings, of which the more wealthy library has the felicity of possessing the originals. One other word. Mr. Batsford has criticised me for what he calls "belittling" books in our collection. Anyone who knows the Library as well as I do will acquit me of any such intention. I had my choice to speak of either books or drawings; I considered that the books were too huge a subject to be dealt with in one evening, so I elected to take the lesser subject. If I had touched upon the books as well, I am afraid I should have kept you at least another three hours. I thank the Meeting very much indeed for their patient hearing of my Paper, and for their kind expression of thanks.

Mr. J. A. GOTCH, F.S.A. [*F.*], writes: The Institute will be grateful to Mr. Harrison Townsend for his interesting and suggestive Paper. Probably nobody realised until now what a valuable and diversified collection of original drawings we possess. There is ample scope here for much original research work by students. So far as the drawings which I know best are concerned, the Burlington-Devonshire Collection, there are wide fields of investigation yet unexplored, and the seventeen volumes of Palladio's designs are practically virgin soil. The best way to start on examining a collection of drawings is to make a written catalogue of them, with a sufficient, though not necessarily voluminous, description of each drawing. This helps to impress them upon the memory, and enables one to notice points of resemblance or of connection between them. By allowing plenty of spare paper, the original notes can readily be augmented or corrected. By following this method, I have found that what appeared at first sight a hopelessly confused mass of material gradually assumes an orderly and coherent shape. Mr. Townsend's suggestion that a *catalogue raisonné* of the older and less known books should be compiled is admirable, and it is to be hoped that someone may be found to act upon it. The Institute is not yet devoid of the spirit of scholarship which has always accompanied its work on the urgent problems of the passing day. Among the Smithson drawings are two of later date—sketches freely and cleverly drawn in sepia—entitled "Mr. Boujet ft." Can Mr. Townsend, I wonder, say whether this "Mr. Boujet" is likely to be Pierre Puget? One of these sketches was reproduced as the head-piece to my Paper on the Smithson drawings in the Journal of the 16th November 1908.

REVIEWS.

CHOLSEY CHURCH.

An Analysis of the Church of St. Mary, Cholsey, in the County of Berkshire. By F. J. Cole, D.Sc. Oxon., Professor of Zoology, University College, Reading. With 23 plates. 8o. Oxon. 1911. 5s. net. [B. H. Blackwell, Broad Street, Oxford; Henry Frowde, Amen Corner.]

In the eyes of an architect, the faithful survey and careful analysis of any building with a history of its own must ever count as a piece of work of distinct value, at least as regards the particular subject itself, and, at the same time, it may prove of higher and wider value as this subject is observed to take its own place in a class or series of examples. Supposing such a survey could be made immediately available of—say—each of the simpler examples only of mediæval churches in this country, just those whose first plan has remained uncomplicated by serious expansion or alteration, what a flood of still-needed light might be shed forthwith on the question of the structural growth of our English parish churches! Such a survey, enabling us to read and compare the several biographies of all those comparatively simple structures which have been but in a moderate degree subject to the process of expansion since their erection in the main form we see, would afford us a solid footing on which we might build up a true history of church architecture in our own country; proceeding, as we should be doing, by the light of ascertained fact, using the simpler and more easily comprehended examples as the key to the riddle of the more complex. And, we may ask, if such a survey can be made of one example, why not of each one?

Let us be grateful, at any rate, for one such piece of good work done by Dr. Cole, of University College, Reading, in his analysis of the Church of St. Mary, Cholsey, Berks. This volume, we are told, is issued in accordance with a scheme for the publication of studies dealing with particular aspects of local history in the neighbourhood of Reading. The object is to stimulate public interest in the history of the locality and to afford a means by which the general historical teaching at University College may gradually become connected with and be illustrated by the detailed evidence which is furnished by local history.

The author prefaces his remarks by saying that he has "taken for granted in the present essay that only an investigation by methods of precision can bring the study of the parish churches within the cognisance of serious research." "The amateur," he goes on to say, "finding it easy to classify his detail according to the Norman, Early English, Decorated and Perpendicular convention, cultivates the deadly shade of that architectural Upas." "On the other hand, the professional architect gives us a set of drawings, of the greatest value let it be at once said, but unaccompanied

by any attempt to wrest the secrets from the building he has been measuring." It is allowed, however, that conspicuous exceptions to both these statements can be adduced; so we breathe again. As a matter of fact, the author has to record his mistrust of an architect's plans of the building he is describing, plans showing certain things, not as they are, but as they are *not*. How often such mistrust is deserved, any architect knows who has had to compare drawings by different draughtsmen purporting to represent the same piece of work. In such case, a reference to photographs or to the work itself may quite possibly set him asking—in haste—what drawings of existing work are correct, and, further, of what use are incorrect drawings; what secrets are likely to be wrested from the building by their aid?

ST. MARY'S CHURCH, CHOLSEY: VIEW FROM THE SOUTH-EAST.

Dr. Cole is a careful investigator, as is shown by his recorded observations and tabulated dimensions, taken down to quarters of the inch, as well as by his prudent consultation of acknowledged authorities on the subject, and of the sixty-seven works which he names as publications he has found useful in this particular study. Amongst his XXII. Plates there are four bearing the inscription "F. J. C. del.," three of these being filled with clearly delineated profiles of mouldings and other details, to large scale, apparently reduced from full-size drawings, whilst the fourth is a general plan, to good-sized scale, of the building as it stands. There is also a detailed plan of the crossing included with the text, drawn-out by the author from his own series of measurements. The remaining plates, with the exception of a conjectural plan of the church as it may have been in the twelfth century, consist of well-chosen photographic views without any photographer's name or initials. The plate of most importance is, of course, the ground plan, showing the existing general arrangement; but the value of this, as a diagram, might have been enhanced if, by various shading, different portions of walling could have been distinguished according to their order of execution. Had the author trusted himself to convey this desirable information on his general plan, there would have been even less call than is now apparent for the plate containing his conjectural plan, to a different scale, in the devising of which, he frankly admits, he has not accepted a suggestion offered by Mr. Bilson, the reader of his proof-sheets, as to the possible form taken by the original eastern arm of the church. This conjectural plan of Dr. Cole's looks like a rather premature attempt on his part to sum-up the case after making, as he tells us, an

unsuccessful attempt, by digging, to obtain sufficient evidence for determining the first form of the chancel.

The actual edifice is represented as being a cross-planned church with a central tower and transepts, a nave and a chancel, both un-aisled. The two arches opening from the tower to the transepts are far simpler in design, and of narrower span, than those opening to the nave and chancel; whilst the transept walls are shown distinctly thinner than those of the nave, and not themselves in line from north transept to south. By the way, a discrepancy in regard to the north transept walls appears between the author's detailed plan of the crossing and his general plan. From the outer face of the eastern wall of each transept, there projects a small semi-circular apse, the foundations of which have been discovered and measured by the author. This of itself is a distinct achievement on his part. The body of the above-named work (other than the chancel), whether it be all of quite the same building-time and building-project or not, appears to belong, at any rate, to a time extending but little later than the middle of the twelfth century. The rectangular chancel, rather more in length than twice its own span, seems no less clearly to proclaim itself a work hardly earlier than the middle of the thirteenth century. What this square-cornered eastward extension replaces—for an extension it must have been—is a question which the author hopes may be answered, "if ever the tiling in the chancel meets the fate it deserves." Then, indeed, his conjectural plan may come in useful for reference. It seems that the tower has twice undergone a process of raising or partial rebuilding, having a thirteenth-century stage, starting up from twelfth-century work at about the level of the transept ridge, with a top-story, containing belfry-lights, then raised on that, of the fourteenth century. By this time, the growth of the fabric into the general form it now holds must have been complete. The subsequent lowering in pitch of the nave-roof and the reworking of certain window-openings to an enlarged form are but minor incidents in the story, incidents to which parallels can be found in most of our old churches.

Dr. Cole goes about his inquiry in a methodical manner, conscientiously aiming at thoroughness and exactness above all, and he presents the results of this inquiry in a way of his own, which, if not precisely what one might feel entitled to look for from a trained architectural student, compares not unfavourably with work produced by many professed students of architecture. He divides his book into five chapters: viz. a brief Introduction; a short Historical Note, of distinct interest, by Mr. F. M. Stenton; the General History of the Fabric, from the twelfth to the fifteenth century inclusive; a Detailed Description of the Church, feature by feature; and then the Mouldings, century by century. Three Appendixes, and an Index, with the Plates collected together at the end, complete the volume.

It is to be feared that the effect of attempting to tell the life-story of this church in several non-continuous chapters—one of these describing the building-work according to chronological sequence, whilst the next describes it over again, according to position in the fabric—must be to miss conveying quite clearly to the uninitiated a due sense of the unity and continuity in the edifice viewed as one thing, a living-thing virtually, which has grown into existing shape through a series of modifications made in it from time to time since its first building-project began to take solid form. To tell first of its so-called general history, and next of its features and mouldings—almost as though these did not form part of the history, going in fact over the ground twice or more, is needlessly to confuse a narrative which calls for all the clearness and simplification that can be brought to its telling, if sound teaching is to result. In the study of building-work of former days, the gathering of the evidence and the presentation of it to would-be learners are two operations; to methods of precision in investigation must be added ordered method in marshalling and interpreting the facts ascertained; to present a complete analysis, and to wrest the secrets from an old building and tell them plainly, involves bringing-in to the aid of painstaking observation the higher-power lens of insight.

The author, in his presentation of the evidence he brings forward, betrays some apparent lack of familiarity with ordinary building-practice; for instance, in such a matter as his taking dimensions, not as a building student might be expected to, by bed-joints and sight-sizes, but by curious, over-all measurements; in the case of such a feature as a window, measuring it "from apex of hood-mould to base of sill," and "externally between outer edges of jamb-moulds." Again, he omits from his plans all ticks to show from where to where his figured dimensions extend. At such-like peculiarities of practice some of our more workmanlike students might be inclined to smile; but, I would ask, how many to-day of our architect-students would, on the whole, produce a better survey and analysis of an old building than this of Dr. Cole's; how many of them would get up enough interest in the subject, for its own sake, to make the attempt? Yet, who is to record the architectural monuments of our land and gather the materials for our architectural history, if not trained students of architecture? It is not a matter of every-day occurrence to find a science professor in a University College having the aptitude and the will to produce an important survey such as this, of one of our mediæval churches; and when the maker of the survey goes on to achieve a piece of real discovery, as in this case with regard to the transept apses, it behoves archi-

tectural students to recognise generously a bit of good work done. Let us welcome this as a valuable contribution to our too-slowly accumulating body of knowledge concerning the building-history of the country, and let us hope that the author may again care to challenge our architectural students on their own ground. The subjects for such study, to be sure, are now being scheduled and surveyed by a Royal Commission on Historical Monuments in this country, whose labours, it is estimated, will not be completed for more than half a century. These subjects, standing examples of the building-work of the past, lie dotted in scores across the country-side, each related to others by countless ties of affinity; each one itself a link in a series, arranged not so much in the form of a chain as after the fashion of a piece of chain-mail, every link interlocking with several immediately allied to it, and through these connecting-up with others beyond, and so ultimately with all.—WALTER MILLARD [*A.*].

MR. BILSON ON BERNAY.

La Date et la Construction de l'Eglise Abbatiale de Bernay. Par John Bilson. Nouvelles Observations par le Chanoine Porée. 8o. *Caen* 1912. [*Henri Delesques*, 34 *rue Demolombe.*]

The Abbey Church of Bernay, situated in the market-place of a pleasant little town between Rouen and Caen, and now used as a corn store, has great importance for the history of Norman building both in France and England. In this excerpt from the *Bulletin Monumental* Mr. Bilson gives the results of a very careful examination of the masonry of the fabric. The author is an expert on Norman architecture, whose judgment is highly valued in France by scholars like Lasteyrie and Enlart, and, as usual, his conclusions are convincing.

The church was cruciform, having nave and aisles of seven bays, aisleless transepts, and an eastern limb of two bays with three parallel apses. The apses have been destroyed, but the foundations of those terminating the aisles have lately been excavated; they were curved to the exterior, and not, as in many early Norman churches, recessed in straight walls. Apsed chapels also projected to the east of the transepts.

The main piers, which have the form of a plain central mass (longer from east to west than in the opposite direction), with attached "responds" consisting of a big half-round shaft attached to a pilaster strip, are so jointed that many observers have hitherto thought that the central mass must be older than the "responds." Mr. Bilson shows that the piers were built of this compound form at one time. The courses of the masonry do not range throughout the piers; but Mr. Bilson says that even at the two ends of the same central oblong mass they are not at the same levels, and that the bonding of the responds is such as to prove that the work is homogeneous. Apparently it was not thought necessary to reduce all the stones which were set at about the same level into a uniform "course," but rather to let them meet as they would, sometimes lapping or notching over one another.

By minute indications, which his remarkable knowledge of Norman buildings enables him to interpret, he shows that the church was built from east to west in the most usual way, and he points out certain resemblances between Bernay and works at Auxerre and Nevers, erected *c.* 1025. The Abbey of Bernay is recorded to have been begun by the Countess Judith, who died in 1017. There may have been some short interruption at her death, but the work is practically homogeneous, and the main fabric was probably finished by 1050. It is essentially a church of the first half of the eleventh century. Many French writers have held that the tall attached strips, which frequently divide the bays in Norman churches, supported roof timbers. Mr. Bilson, who has argued against this view before, points out that of fifty "strips" or "responds" of similar form at Bernay, there are only two (the pair of high ones in the choir) which do not support arches, and says that it is most unlikely that this pair were not intended to carry arches as well. On the remarkable domical vaulting of the south aisle of the nave he does not definitely pronounce, but he is inclined to think that these vaults are seventeenth-century work. He supposes further that the structure was built without buttresses.

It is dangerous to be in opposition to Mr. Bilson, for he knows his own ground so well that he has the habit of being right in his conclusions. I should like, however, to offer a few observations on some of the minor points last mentioned, without committing myself to positive statements. When I was at Bernay about twenty months ago, I thought that I saw traces of buttresses on the exterior of the north aisle of the choir.

The domed vaults of the south aisle seemed to me to be ancient. In support of this view I would give the following reasons. The bays of the choir which were covered with groined vaults are narrow and long. The nave aisle is made wider, so that the bays are squarer, and, further, the transverse arches between the bays are of a different form from those in the choir aisle and very wide, so that the spaces to be vaulted must be practically *square*. The vaulting masonry is in very small courses (say three or four inches) and of chalk; these seem to be ancient characteristics.

So much for internal evidence; as external support, I rapidly note the following without being able to give the time for verification. Dome construction was probably well known at least as far north as Tours. The great church at Fontevrault is covered with cupolas, and a small church (St. George) on the north side of the river has a dome to its tower (see Fig. 1). In the Forest of Loches at Liget there is a circular chapel (*c.* 1160), which

I believe is covered with a plain dome. In Angers Museum I think that I have seen an old section of the ancient Church of St. Martin, showing the central tower with a cupola. The vault under the tower of St. Aubin, in the same city, has (Mr. Bilson tells me) a cupola-vault with diagonal ribs. The vault over the crossing of the Church of Holy Cross at Quimperlé is, I believe, domical with diagonal arches.

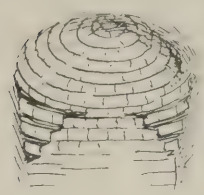

FIG. 1.

In a walk along the high banks of the Seine, west from Les Andelys, I visited some sixteen years ago an old round tower (? La Roche). If my memory is not at fault, the tower was covered, internally, by a rude little cupola. I cannot guarantee the age of this tower. Under the north-west tower at Bayeux (*c.* 1070) is a vault which rises from all four sides, forming a square dome, or "cloister vault"; two big ribs cross one another beneath it; such a vault may imply a knowledge of the cupola. Near Bayeux is an ancient church at Rucqueville, which had over the crossing a cupola very similar to the vaults at Bernay. Mr. Bilson has examined the evidence here and has come to the conclusion that the dome was of seventeenth-century workmanship. At the same time, he points out that other parts of this church resemble work at Bernay and must be of its early date. As it would be a very remarkable coincidence if the one church in Normandy which is closest in style to Bernay should also, like it, have a seventeenth-century cupola, I am inclined to suggest that this case should be re-examined. Altogether, I think it likely that cupola vaulting was occasionally practised north of Tours early in the eleventh century, and that this type only gradually gave way to the cross vault. On cupolas in French Romanesque churches see Lasteyrie's new volume.

As to tall internal strips between the bays in Norman churches, they may frequently have carried transverse arches. At Loc Tudy, in South Brittany, I have seen an early church with pillared apse, ambulatory, and three round chapels, which together with one bay in front of the apse were vaulted, while the nave and aisles had transverse arches with a wooden roof. The vault in front of the apse is a barrel; this is also the case at Loc Maria Church, close to Quimper. Transverse arches under barrel vaults rising from tall "responds" are quite common in the churches of the Loire district; I do think it possible that at times the projecting strips were adopted further north as stiffening without their having any other function above.

Mr. Bilson's comparison between Bernay and Auxerre and Nevers is interesting as supporting the view that the Norman builders derived some of their traditions from Burgundy.

W. R. LETHABY [*F.*].

ROMANESQUE ARCHITECTURE.

Romanesque Architecture in France. Edited by Dr. Julius Baum. 4o. *Lond.* 1911. *Price* 25*s.* [*W. Heinemann.*]

This is a collection of 226 photographic plates of French buildings of the eleventh and twelfth centuries—with two or three exceptions, churches or parts of churches. The views both exterior and interior are clear and distinct; they are clear enough to show the exact state of repair of each building, and to show only too clearly how many of them have been spoilt by excessive and injudicious restoration. Some of the photographs were happily taken before restoration and form valuable records of what no longer exists. The beauty of a photographic plate depends of course on other things than the architectural qualities of the buildings represented: some of the plates in addition to being valuable records of fine buildings are records also of very beautiful effects of light and shade.

The subjects chosen range over twenty departments in the north, south, east, and west of France; though, as is inevitable, the greater number come from the north and west. The west especially, including the departments of the Charente, Charente Inférieure, Vienne, and Deux Sèvres—the ancient county of Poitou—is particularly rich in churches of this period, but the Norman work of the north, especially in the department of Calvados, has its fair share of examples.

The introduction consists of a general survey, compressed into thirteen quarto pages, of Romanesque architecture in France, Germany, and Italy; and with this survey of the various developments of the style in different districts the writer has interwoven a number of opinions of his own with which some of his readers will agree and some will disagree. The composition of the introduction is not very clear nor very easy to follow, and the difficulty is increased by various ambiguities of expression which possibly arise from a not quite perfect acquaintance with our language. The expression "flat roofed type of basilica" for instance is, at first sight, rather puzzling when applied to early Italian churches. These churches never had flat roofs, but they sometimes had flat ceilings under their low pitched tile roofs. The expression "single-aisled church" is surely a contradiction in terms. "Aisle" is the French word "aile," a wing; the corresponding French architectural term is "bas côté," and it means the lateral addition to the central nave of a church which is covered by a lean-to roof: the proper description of a church here called single-aisled is "aisleless," although both "single-aisled" and "three- and five-aisled" are expressions which have been used by English writers of repute. "Ordonnance" is hardly an English word and has to be translated "disposition" or "arrangement." We must, however, be grateful to the writer of the introduction for a great deal of interesting historical information.

ARTHUR DIXON [*F.*].

CORRESPONDENCE.

The R.I.B.A. and Registration.

Grand Hôtel Londres, Royal Deux Tours,
Verona: 21st April 1912.

SIR,—In reference to the letter from the Institute Members' Club which appeared in the JOURNAL of the R.I.B.A. of the 13th inst., we should like to point out that the question of Registration with which it deals is one so profoundly affecting the welfare of the profession that it should not be allowed to die through the apathy or indifference of the responsible guardians of the trust and obligations imposed upon them by the general body of the Institute. Nobody regrets more than ourselves the futile efforts made by the R.I.B.A. to deal successfully with a great problem which is of vital interest to every practising architect. These futile efforts were the result of an adoption of a foolish compromise which satisfied neither side, and subsequent events have shown that the compact made five years ago was an unworkable one. In these circumstances, we now feel free to take an independent course and to definitely and finally throw over our allegiance to the policy of compromise then forced upon us, with which we have never pretended to be really in sympathy.

We consider that the R.I.B.A. scheme, even with any considerable modification of its details, could never become law, for it is ludicrous to suppose that any Government would permit the Institute to become the sole examining body for granting diplomas, or allow it to have sole jurisdiction over the profession of which it forms so small a part. For instance, the University of Cambridge has inaugurated a School of Architecture and instituted examinations on a higher and more comprehensive scale than those of the Institute. Is it likely that this ancient seat of learning, one of the two oldest educational centres in the kingdom, with its two Parliamentary representatives, would submit for one moment to the proposed dictatorship of the Institute?

Again, is it reasonable to assume that the University of Oxford, which will probably follow the sister University in founding a course of study in Architecture, with its prestige, power, and influence behind it, will stultify a more than probable future educational extension by passively submitting to the philandering scheme of the Institute?

Surely, having regard to the fact that the policy of the R.I.B.A. is bound to bring about the active opposition of the distinguished Parliamentary representatives of these Universities, whose views on educational questions would be likely to be accepted by Parliament almost without question, there would be no chance of the Institute's Bill becoming law, unless the equitable recognition of these and other educational bodies were freely accorded.

As a melancholy example of the short-sighted policy of the Board of Architectural Education, whose action was subsequently confirmed by the Council, we may quote the case of Cambridge University.

Certain universities of recent formation and without Parliamentary representatives which have adopted the R.I.B.A. regulations in regard to architectural study were regarded as "recognised schools," and, as such, obtained certain privileges, *i.e.* exemption from the Intermediate Examination, etc.; whereas Cambridge, with a higher standard of education and powerful influence in both Houses, was not accorded a similar exemption. The absurdity of this exclusion is more apparent when certain other facts are taken into consideration, such as the privileges accorded to Liverpool and Manchester, which were granted because those Universities taught "Design," whereas Cambridge does not pretend to do so.

The reason for excluding Cambridge is not quite clear, inasmuch as "Design" is only an optional subject in the Intermediate Examination, and the confusion of ideas becomes absolutely chaotic when it is remembered that the leading opponents to Registration have declared over and over again that "Design" cannot be taught, and therefore we should have thought could not become a subject for examination.

However, the question of education is one of far too serious a nature to be allowed to be treated thus lightly and illogically; consequently, as a preliminary proceeding, we think the Institute would be well advised to approach the older Universities on the subject of Architectural Education in a far more friendly and conciliatory spirit than it has yet shown, with a view to enlisting their guidance and support. Further, it is folly for the Institute to imagine that it has the remotest chance of securing Parliamentary recognition for its members without due assurance that its proposals will not encounter the active opposition of the Surveyors' and Engineers' Institutions, to say nothing of the many Borough and County Councils, all of which bodies will assuredly have to be placated.

In short, the Institute must remember that it is acting for the welfare of a large profession, of which it forms only a part, and not for the individual glorification of its members.

There is much spade work to be done by the Institute before any Bill can be drafted, and if the R.I.B.A. would condescend to set about this preliminary work, instead of forming itself into Committees to draft Bills which have no earthly chance of ever becoming the law of the land, the Council would be embarking on a course of profitable work. The continuance of its policy of spending its time, and irritating its more serious members, in futile efforts to obtain Parliamentary recognition without first preparing the ground, seems to us to be nothing more or less than trifling with a stupendous problem which has yet to be solved.—Yours faithfully,

A. W. S. CROSS [*F.*].
GEORGE HUBBARD [*F.*].

9 Conduit Street, London, W., 27*th April* 1912.

CHRONICLE.

The Extra General Meeting 15th April.

The publication of Mr. Saxon Snell's Paper, "The R.I.B.A. Conditions of Contract: Some Points for Revision," read at the Extra General Meeting held on the 15th April, together with the discussion which ensued on this and on the Papers by Messrs. W. Henry White and Edward Greenop* adjourned from the meeting of the 18th December last, is postponed pending the reading of a further Paper connected with the same subject by Mr. Wm. Woodward, when the whole will be published together in one number. Mr. Woodward's Paper, which deals particularly with the recent case of *Minter* v. *Waldstein*, will be read at an Extra General Meeting called for Monday, 3rd June. The speakers at the meeting of the 15th inst. included the Chairman (Mr. Reginald Blomfield, A.R.A.), Messrs. R. L. Harrison (the solicitor who was largely responsible for the drafting of the Institute Conditions of Contract), G. R. Blanco White (barrister-at-law), W. H. Atkin-Berry [*F.*], Max. Clarke [*F.*], Matt. Garbutt [*F.*], R. G. Lovell [*A.*], Alan E. Munby [*A.*], J. Douglass Mathews [*F.*], G. Ernest Nield [*F.*], H. D. Searles-Wood [*F.*], Wm. Woodward [*F.*], Douglas Wood [*A.*], W. Henry White [*F.*], Edward Greenop [*A.*], and H. Saxon Snell.

The New British School at Rome.

A White Paper headed "The College Charter Act 1871" just issued from H.M. Stationery Office sets out the Petition presented to His Majesty for the "Establishment of an Institution to be known as 'The British School at Rome,'" together with the Draft of the Charter applied for. The Petitioners were the Duke of Connaught, the Commissioners for the Exhibition of 1851, the Royal Academy of Arts, the Royal Institute of British Architects, the Royal Society of British Sculptors and the British School at Rome. The Draft Charter describes the objects of the School to be as follows :—

(*a*) The promotion of the study of Archæology, History and Letters, Architecture, Painting, Sculpture, and the Allied Arts by British subjects :

(*b*) The establishment and maintenance in Rome of a Hostel for British students of Art, Archæology, History, and Letters :

(*c*) The establishment and maintenance of Studios and other buildings for the purposes of the School and their use by the Students and other persons attending the School :

(*d*) The continuance of the archæological and other researches and publications which have hitherto been carried on and issued by the old British School at Rome, and the carrying on and issuing of such other studies and researches and publications as may from time to time be determined upon :

(*e*) The formation and maintenance in Rome of a General Library of Art, Archæology, History, and Letters :

(*f*) The Awarding of Scholarships, Exhibitions, Bursaries, and other forms of assistance to British Students of Art, Archæology, History, or Letters :

(*g*) All such things as shall be incidental to or tend to the promotion of any of the objects aforesaid.

The Council will be constituted as follows :—

(*a*) Two Members appointed by the Sovereign under the Royal Sign Manual.

(*b*) Four by the Commissioners for the Exhibition of 1851 :

(*c*) One by the Trustees of the British Museum :

(*d*) Four by the Royal Academy of Arts, of whom one will be an Architect, two will be Painters, and one will be a Sculptor :

(*e*) Two by the Royal Institute of British Architects, both of whom will be Architects :

(*f*) Two by the Royal Society of British Sculptors, both of whom will be Sculptors :

(*g*) Two by the Royal Scottish Academy :

(*h*) Two by the Royal Hibernian Academy :

(*i*) One by the Prime Minister for the time being :

(*j*) One by the President of the Board of Education for the time being.

There will be four Faculties in the first instance, namely (*a*) Archæology, History and Letters; (*b*) Architecture; (*c*) Painting; (*d*) Sculpture.

The names of the first Members of the Faculty of Architecture are given as follows :—

Reginald Blomfield, Esq., M.A., A.R.A., F.R.I.B.A.
William Richard Lethaby, Esq., F.R.I.B.A.
Edwin Landseer Lutyens, F.R.I.B.A.
Sir Robert Stodart Lorimer, A.R.S.A., F.R.I.B.A.
Ernest Newton, Esq., A.R.A., F.R.I.B.A.
Charles Herbert Reilly, Esq., A.R.I.B.A.
John William Simpson, Esq., F.R.I.B.A.
Leonard Aloysius Scott Stokes, Esq., P.R.I.B.A.
Sir Aston Webb, C.B., C.V.O., R.A., F.R.I.B.A.

The Commune of Rome have presented for the purposes of the School the site of the Pavilion used for the British Section of Fine Arts in the International Exhibition held at Rome last year, and Colonel Charlton Humphreys has presented the buildings on the site.

An Architect Victim of the "Titanic" Disaster.

At the General Meeting last Monday Mr. Henry T. Hare, *Hon. Secretary*, mentioned that among the passengers lost on the "Titanic" was the distinguished American architect, Mr. Edward A. Kent, of Buffalo, N.Y. Mr. Kent was a frequent visitor to Europe, and was well known and very highly esteemed by the profession on this side of the

* "The Newer Responsibilities of Architects," Journal, 13th January 1912.

Atlantic. He was present at the International Congress of Architects in London a few years ago, also at the Town Planning Congress in October 1910, and at the Vienna Congress in 1908. Mr. Hare said he felt sure it would be the wish of the meeting that some expression of their regret should be transmitted to his relative, his only sister.

The Chairman (Mr. E. Guy Dawber) paid a personal tribute of respect to the high qualities of the late architect, who represented, he said, the very best type of American gentleman. Mr. Kent was a very keen and enthusiastic exponent of his art, a great traveller, and deeply interested in English architecture, and especially in the work of the Royal Institute. He was sure they all felt the deepest sympathy with his sister, who was devotedly attached to him. Mr. Kent had only just returned from Egypt where he had been staying for the benefit of his health, and had purposely delayed his return to America in order to go by the "Titanic."

A resolution of sympathy and condolence with the bereaved lady was put from the Chair and silently assented to.

Indian Art and the New Delhi.

Referring to Lord Hardinge's speech at the final meeting of the Imperial Legislative Council in Calcutta on 25th March when he stated that personally he should favour an Oriental style of architecture for the new Government buildings at Delhi, Mr. E. B. Havell writes in *The Times* of the 22nd inst.: "It will be a great step forward if the style of the buildings is Indian in character or intention, even if the designs are made entirely by European architects without the co-operation of the Indian master-builder; for the Princes and aristocracy of India will no longer be misled in architectural taste by the example of the Public Works Department and encouraged to neglect Indian art in the way they have usually done. Unfortunately some departmental experts in India seem bent on prejudicing the case for Indian art by public declarations that the Indian master-builder is a figment of my imagination. It should be evident that if the Indian builder has been driven out of existence or become useless for departmental purposes, except as a common labourer, either fact would constitute a more fatal indictment of British administration in the Public Works Department than any I have brought forward. Under the circumstances the Viceroy's statement, though only made as a pious opinion, is very opportune; for the true condition of the Indian building craft can easily be ascertained if the inquiry set on foot by the Government of India last year at the suggestion of the India Society is conscientiously and thoroughly carried out."

Concrete with Timber Reinforcement.

In a Paper on "Ligno-concrete," read recently before the Society of Engineers, Mr. Gerald O. Case described some investigations undertaken with the object of ascertaining whether it was possible to reinforce concrete with timber rods. An account was given of experiments made to ascertain: (*a*) the amount of water absorbed by eighteen kinds of timber immersed in fresh water, along the grain and through the end grain respectively; (*b*) the relative absorption by the timber of fresh and sea water in the same period; (*c*) the relative amount of water absorbed by timber embedded in 6 to 1 concrete and neat cement blocks; (*d*) the effect of applying wood preservative, creosote, varnish, etc., to the timber before insertion in the concrete or cement blocks; (*e*) the effect on the adhesion between the timber and the concrete of soaking the rods before insertion. Examples were given to show that concrete effectively preserved timber embedded in it. A series of tests of ligno-concrete and plain concrete beams carried out at the Brighton Municipal Technical College, and another series at East London College, were described. The results are briefly recorded in *The Times* Engineering Supplement of the 10th April. In the author's opinion ligno-concrete cannot compete with ferro-concrete for purposes where more than about 1·2 per cent. of steel reinforcement was required, because the size of the timber would be too large for convenient use, but he considers there is a large field for it in the construction of bungalows, buildings for small holdings, floors, piles, posts, fencing, coast and river work, etc. It has already been used for making fence posts from the author's designs. The cost works out at about 2·1*s.* per foot cube, or about 20 per cent. cheaper than creosoted yellow deal and 40 per cent. cheaper than English oak. In Canada, as a result of the author's investigations, the Pacific Coast Construction Company of Victoria, British Columbia, has formed a special ligno-concrete department, and has made a large number of slabs for houses. They have built four houses, and at the present time have contracts in hand for over twenty others of the bungalow type, all of which are to be built with ligno-concrete slabs. The slabs are made to a standard size, 8 feet by 2 feet, by 3 inches or 1½ inches thick. If they were made 1½ inches thick, two of them were used to form a hollow wall. No slabs have shown the slightest signs of cracking, although they were transported by rail three weeks after they had been cast.

The Prevention of Vandalism.

The Bishop of Winchester presided at a meeting held at Farnham Castle last week at which a society was formed for the preservation of the ancient features of the town and for promoting its beauty in future developments. The Dean of Wells, who is on a visit to the Bishop, said that such societies were needed all over England. Such a society would be of the greatest advantage to them at Wells. It was a city of wonderful beauty, not only

in the Cathedral and its buildings, but also in the city itself—the old houses, the old inns, the almshouses, and various charming features—and these were in constant peril of a very insidious kind, because it was no one's business exactly to look after them. The delay in the disappearance of one very interesting feature was partly due to the excellence of succeeding Mayors, who were unwilling to have their names associated with an act of barbarism. He thought it important that they should recognise the difficulties which beset civic authorities in many of these matters. They found themselves often very helpless as individuals, but were most ready to accept the informal help which came from the quickening of public opinion.

Municipal Officials and Architectural Work.

The recent deputation from the Glasgow Institute of Architects to the Glasgow Corporation to protest against the employment of municipal officials to carry out architectural work was headed, not by Mr. John B. Wilson [*F.*] as reported in the last number of the JOURNAL, but by Mr. Alexander N. Paterson, A.R.S.A. [*F.*], who has succeeded Mr. Wilson as President, and who was the author of the address delivered on the occasion. The Glasgow Institute is to be congratulated on the satisfactory result of its protest. Mr. Paterson's representations had the desired effect, and the Corporation have decided to invite plans from outside architects for the proposed Municipal Buildings Extension instead of having the work carried out by their own officials as originally intended.

The R.I.B.A. Colonial Examinations.

At the Special Colonial Examinations held in November last at Toronto and Johannesburg the following candidates passed and have become eligible for candidature as Associates R.I.B.A.:

TORONTO.

ALLEN: Newstead Adams [*Probationer* 1902, *Student* 1909]; General Delivery G.P.O., Montreal, Canada.

MOIR: David James [*Probationer* 1903, *Student* 1909]; 192 Mance Street, Montreal, Canada.

JOHANNESBURG.

PEARSE: Geoffrey Eastcott [*Probationer* 1904, *Student* 1909]; P.O. Box 2269, Johannesburg, S. Africa.

The Regent Street Quadrant.

In view of the importance of securing suitable architectural treatment for Regent Street Quadrant, *The Builder* has instituted a competition "for designs suggesting a façade in harmony with the Piccadilly Hotel, but giving more consideration to the requirements of the retail trader." Drawings must be sent in by the 14th June, and the adjudication will be made by Messrs. E. A. Rickards [*F.*] and Alan E. Munby [*A.*]. The designs will be exhibited at the A. A. Galleries in Tufton Street. A premium of twenty-five guineas will be paid to the author of the design placed first, and a further twenty-five guineas will be divided between the authors of other designs in such proportions as the assessors may decide.

MINUTES. XII.

EXTRA GENERAL MEETING (ORDINARY) 15th APRIL.

At an Extra General Meeting (Ordinary) held Monday, 15th April 1912, at 8 p.m.—Present: Mr. Reginald Blomfield, A.R.A., *Vice-President*, in the Chair; 23 Fellows (including 7 members of the Council), 27 Associates (including 2 members of the Council), 5 Licentiates, and 8 visitors—the Minutes of the Meeting held 1st April 1912, having been published in the JOURNAL, were taken as read and signed as correct.

Mr. E. Guy Dawber, *Vice-President*, in the absence of the Hon. Secretary, announced the decease of Elijah Hoole, *Associate* 1869, *Fellow* 1874, *Retired Fellow* 1911.

Mr. Richard Goulburn Lovell, *Associate*, attending for the first time since his election, was formally admitted by the Chairman.

A Paper entitled THE R.I.B.A. CONDITIONS OF CONTRACT: SOME POINTS FOR REVISION, having been read by Mr. A. Saxon Snell [*F.*], was discussed together with the Papers on "The Newer Responsibilities of Architects" read by Messrs. W. Henry White [*F.*] and Edward Greenop [*A.*] at the Meeting of the 18th December [JOURNAL, 13th January], and on the motion of Mr. R. L. Harrison, Solicitor, seconded by Mr. W. H. Atkin-Berry [*F.*], a vote of thanks to the authors was passed by acclamation.

The proceedings terminated at 10.30 p.m.

GENERAL MEETING (ORDINARY) 22nd APRIL.

At the Twelfth General Meeting (Ordinary) of the Session 1911-12, held Monday, 22nd April 1912, at 8 p.m.—Present, Mr. E. Guy Dawber, *Vice-President*, in the Chair; 14 Fellows (including 5 members of the Council), 27 Associates (including 1 member of the Council), 3 Licentiates, and numerous visitors—the Minutes of the Meeting held 1st April 1912 were read and signed as correct.

The Hon. Secretary announced the decease of Robert John Macbeth, *Fellow*, elected 1906; John Bevan Phillips, *Associate*, elected 1884; Henry Shackleton, *Associate*, elected 1906; Edward Ashby Smith, *Licentiate*.

The Hon. Secretary also announced that among the victims of the *Titanic* disaster was Mr. Edward A. Kent, the distinguished American architect so well known in the profession on this side of the Atlantic, and a resolution was passed expressive of the Institute's regret at his loss and of sympathy and condolence with his sister in her bereavement.

The following Associates attending for the first time since their election were formally admitted by the Chairman—viz. Richard B. Ling and Harold E. Moss.

A Paper by Mr. C. Harrison Townsend entitled THE ROYAL INSTITUTE LIBRARY AND SOME OF ITS CONTENTS having been read and illustrated by a large number of lantern slides, a discussion ensued, and a vote of thanks, moved by Mr. R. Phené Spiers, F.S.A. [*F.*], and seconded by Mr. E. F. Strange, Assistant Keeper Victoria and Albert Museum, was passed to Mr. Townsend by acclamation.

The proceedings terminated at 10.30 p.m.

Architectural Library

REPORT OF THE COUNCIL FOR THE OFFICIAL YEAR 1911–1912.

Approved and adopted at the Annual General Meeting, Monday, 6th May 1912.

SINCE the publication of the last Annual Report the Council have held 27 Meetings, of which the Council elected in June last have held 22. The following Boards and Committees appointed by the Council have met and reported from time to time on the matters referred to them :—Architectural Copyright, Annual Dinner, Architectural Education, Professional Defence, By-Laws Revision, Competitions, Fellowship Drawings, Finance, Fire Prevention Circular, Henry Jarvis Bequest, Joint Committee on Reinforced Concrete, JOURNAL and KALENDAR, Lambeth Bridge, Licentiates' Drawings, Professional Questions, Proposed Architectural Scholarship (Rome), Records, Registration, Royal Gold Medal, St. Paul's Bridge, Schedule of Charges, Sessional Papers, Society of Architects, Town Planning. Particulars of the work of these Boards and Committees are embodied in the Report under various headings.

The Coronation. On the occasion of his Majesty's Coronation the Council presented a loyal address, designed by Mr. Graily Hewitt, on behalf of the members of the Royal Institute, and a scheme of decoration for the premises was prepared by the Honorary Secretary, Mr. Henry T. Hare.

Obituary. The losses by death have been as follows :—*Hon. Fellow* : Sir Francis Sharp Powell, Bart. ;—*Fellows* : Henry Bloomfield Bare, Franc Sadleir Brereton, William Glover, Alexander Graham, William Henry Hill, George Gordon Hoskins, Francis William Humphreys, Robert John Macbeth, Duncan McNaughtan, Dr. John Samuel Phené, James Pigott Pritchett, George Ransome, William Forrest Salmon, Charles Smith ;—*Retired Fellows* : Frederick William Albury, Elijah Hoole, James Radford ;—*Hon. Associate* : Edwin Austin Abbey, R.A. ;—*Associates* : Sydney Bridges, John Codd, William King Lucas, John Bevan Phillips, William C. Poole, Thomas Miller Rickman, Henry Shackleton ;—*Licentiates* : John Davidson, Harry Edward East, Gascoigne Hastings Fowler-Jones, William Pickels, Edward Ashby Smith, Wilfrid Travers Wire ;—*Honorary Corresponding Members* : Fernand de Dartein, Pierre Jérome Honoré Daumet, Alexander von Wielemans.

Royal Gold Medal. The Royal Gold Medal was awarded last year to Dr. Wilhelm Dörpfeld, F.S.A., in recognition of his eminent services to architecture through his archæological researches. Greatly to the regret of the Council, a serious illness made it impossible for Dr. Dörpfeld to receive the Medal in person at the Meeting on 26th June 1911.

It has been decided to award the Medal this year to Mr. Basil Champneys, F.S.A., in recognition of the distinguished merit of his executed work in architecture. His Majesty the King has graciously signified his approval of the award, and the Medal will be presented to Mr. Champneys at the General Meeting on the 24th June.

Membership. The following tabular statement shows the present subscribing membership of the Royal Institute compared with corresponding periods of 1909, 1910, and 1911 :—

Year	Fellows	Associates	Hon. Associates	Total
1909	888	1,344	46	2,278
1910	874	1,431	48	2,353
1911	862	1,509	55	2,426
1912	859	1,581	56	2,496

During the official year since the last Annual General Meeting 13 Fellows have been elected, 108 Associates, and 2 Honorary Associates. The Council have decided to consider the situation which arises from these figures.

Licentiates. The period for the election of Licentiates having been extended to the end of June 1912, applications have come in freely during the whole year, and at the present moment a total of 1,834 Licentiates have been elected, and many other applications are under consideration.

New Allied Societies. Since the publication of the last Annual Report the Council have had the pleasure of admitting the Northamptonshire Association of Architects into alliance with the Royal Institute.

Registration. In the last Annual Report the Council outlined the steps that had been taken to secure united action by the Royal Institute and the Society of Architects in advancing the policy of Registration. Legal and constitutional difficulties made it necessary to lay before the members a proposal to obtain the Privy Council's sanction for a Supplemental Charter and By-Laws conferring the necessary powers on the Royal Institute to amalgamate the two bodies. The Council's proposals for this purpose were laid before a Special General Meeting on the 8th January 1912, and an amendment was carried referring them back to the Council for further consideration. The Council at once appointed a strong and representative Registration Committee to consider and report upon the question, and this Committee is now actively at work under the Chairmanship of Mr. John Slater.

Architectural Copyright. In the new Copyright Act, 1911, the privileges of artistic copyright are for the first time extended to works of architecture.

Board of Professional Defence. The Board have held a number of Meetings, and have given advice to members in questions of a legal nature. They have given attention to several recent judicial decisions which have appeared to enlarge the legal responsibilities of architects, and the possibility of safeguarding the profession against hitherto unforeseen dangers is being carefully considered.

Professional Conduct. The Professional Questions Committee have considered a number of cases referred to them from time to time, and have advised the Council upon them. The Council are now considering the advisability of drawing up and publishing a Code of Professional Ethics for the guidance of members.

The Membership Diploma. A Sub-Committee of the Council is engaged in the preparation of a design for a new Membership Diploma, to take the place of the old Membership Certificate, under the terms of the Supplemental Charter of 1909.

The Schedule of Charges. The Council have been engaged for some time upon the revision of the Schedule of Charges. The Councils of the Allied Societies in the United Kingdom have been consulted in the matter, and it is hoped that the draft will be ready for submission to the General Body at an early date.

The Town Planning Committee. During the past year this Committee has been in communication with the Allied Societies with the object of bringing architectural opinion to bear on the town planning schemes that are being prepared throughout the country. It has already prepared and published a pamphlet for the guidance of promoters of such schemes.

The International Congress, Rome, 1911. The Ninth International Congress of Architects took place at Rome between the 2nd and 10th of October. The British visitors numbered 66 out of a total attendance of some 500, and the Royal Institute was represented by its President, Mr. Leonard A. Stokes, and Mr. John W. Simpson, Vice-President and Secretary of the

Comité Permanent. The British Government was represented by Sir Henry Tanner, C.B., I.S.O. [*F.*], and Mr. W. E. Riley [*F.*] represented the London County Council.

Henry Jarvis Bequest.

This Bequest is now in the hands of the Residuary Trustees, and the Council have advised them, under the terms of the will, to apply the available income to the foundation of Jarvis Studentships at the New School at Rome. If the Council's proposals are accepted there will be an annual examination for the studentship, which will be open to all Students and Associates of the Royal Institute of British Architects under the age of 30 years, and one studentship will be awarded every year, of an annual value of about £180 and tenable for two years.

Howard Colls Bequest.

The President, acting in consultation with the Vice-Presidents, has placed at the disposal of the Architectural Association for its educational purposes a sum of £500 which was bequeathed by Mr. Howard Colls to the President for the time being of the Royal Institute "to be used and applied at his absolute discretion either for educational purposes or for the purposes of the Architects' Benevolent Society."

The New British School at Rome.

During the Presidency of Sir Ernest George the Council gave much consideration to the possibility of founding a British School of Architecture at Rome. A Special Committee was formed to consider the project, and had entered into negotiations with the authorities of the existing British School at Rome. The Council therefore welcomed the intervention of the Commissioners of the Exhibition of 1851, who came forward at a critical moment and, with the assistance of the Royal Institute, the Royal Academy, the Royal Society of Sculptors, and the British School at Rome, founded and endowed a new and enlarged School of Painting, Architecture, Sculpture, and Archæology, which will soon begin its work. The Royal Institute of British Architects is represented on the Council of the new School by Mr. Reginald Blomfield and Mr. John W. Simpson. At the request of the Commissioners the Council have prepared a scheme for the examination of the candidates for the Architectural Scholarship which will be awarded every year by the Commissioners, and it is intended that the holders of the proposed Jarvis Studentship should also be in residence at the new School for a period of two years each.

New London Bridges.

In the last Annual Report the Council referred to the efforts they were then making to induce the Corporation of the City of London to consider the question of the proposed St. Paul's Bridge from an architectural point of view. The action of the Council was largely instrumental in leading the House of Commons to defer the passing of the Bill until the scheme had been considered and reported upon by a specially appointed Committee of architects, consisting of three members of the Royal Institute: Sir Wm. Emerson, Mr. T. E. Collcutt, and Dr. J. J. Burnet.

The Council have also been in communication with the London County Council with reference to the new Lambeth Bridge, and have urged the importance of treating the design of the bridge from the outset as an architectural problem of great importance to London.

The Joint Committee on Reinforced Concrete.

This Committee has compiled and published, with the sanction of the Council, a Second Report on Reinforced Concrete. It has also considered the London County Council's draft Regulations for Reinforced Concrete Construction, and has reported upon them to the Council, who have submitted various criticisms and suggestions to the Local Government Board, whose sanction is required for these Regulations.

Finance.

The Auditors have framed their Report in such a form as to give the members an independent statement of the general financial position of the Royal Institute. The attention of members is particularly directed to this Report.

Examinations.

The Progressive Examinations were held in June and November 1911. The Preliminary was held in London, Bristol, Leeds, Manchester, and Newcastle-on-Tyne; the Intermediate in London, Bristol, Leeds, Manchester, and Newcastle-on-Tyne. The Final and Special Examinations were held in London, and the Special Examination

for Colonial candidates in Johannesburg, Sydney, and Toronto. The Council desire to record their thanks for the valuable services rendered by the Honorary Secretaries and Examination Committees of the various Allied Societies. The results are shown in the following table :- -

	Admitted	Exempted	Examined	Passed	Relegated
Preliminary Examination . . .	241	81	160	123	37
Intermediate Examination . . .	242	15	227	120	107
Final and Special Examinations .	235	—	235	115	120

The Ashpitel Prize was awarded to Philip Dalton Hepworth, who passed the Final Examination in November 1911.

The Statutory Examinations, qualifying for candidature as District Surveyor in London and for candidature as Building Surveyor under Local Authorities, were held in London in October 1911.

The Council desire to thank the Honorary Examiners for the continuance of their invaluable services.

Prizes and Studentships. The Deed of Award of the various Prizes and Studentships was presented to the Institute at a General Meeting on the 22nd January 1912. At the Presentation of Prizes on the 5th February 1912, an Address to Students was delivered by the President, and a criticism of the work submitted was read by Mr. Gerald C. Horsley [*F.*]. An exhibition of the drawings was held from the 23rd January to the 5th February in the Royal Institute Galleries, and was visited by over 1,000 persons. A selection of the Prize Drawings is now being sent the round of the Allied Societies.

Sessional Papers. During the Session the following Papers have been read :—

20th Nov. 1911 : "Modern French Sculpture," by H. Heathcote Statham [*F.*].

18th Dec. : "The Newer Responsibilities of Architects," by W. Henry White [*F.*] and Edward Greenop [*F.*] on behalf of the Practice Standing Committee.

22nd Jan. 1912 : "Colour Decoration," by Sir Alfred East, A.R.A. [*Hon. A.*], and Edgar Wood [*F.*].

19th Feb. : "Collegiate Architecture," by Edward Warren, F.S.A. [*F.*].

18th March : "The Architecture of the French Renaissance," by W. H. Ward [*A.*].

1st April : "Art Museums and Picture Galleries," by Edwin T. Hall [*F.*].

15th April : "The R.I.B.A. Conditions of Contract : Some Points for Revision," by A. Saxon Snell [*F.*], on behalf of the Practice Standing Committee.

22nd April : "The Royal Institute Library and Some of its Contents," by C. Harrison Townsend [*F.*].

The following Papers remain to be read :—

20th May : "Recent University Architecture in the United States," by R. A. Cram.

3rd June : "The Responsibilities of Architects, and the Case of *Minter* v. *Waldstein*," by Wm. Woodward [*F.*], on behalf of the Practice Standing Committee.

Appointments. Since the issue of the last Annual Report the Council have appointed the following gentlemen to serve as the Royal Institute representatives in connection with the various bodies indicated :—

The Council of the reconstituted British School at Rome . . .	Mr. Reginald Blomfield, A.R.A. [*F.*]. Mr. John W. Simpson [*F.*].
Incorporated Joint Committee on Water Regulations . .	Mr. Max Clarke [*F.*].
Third International Congress for Sanitary Dwellings . . .	Mr. Raymond Unwin [*F.*].
Deputation to confer with Sir George Reid, High Commissioner for Australia, *re* the Australian Capital Competition	Mr. Leonard Stokes [*F.*]. Mr. Henry T. Hare [*F.*]. Mr. H. V. Lanchester [*F.*].
Council of the International Smoke Abatement Exhibition . .	Mr. Edwin T. Hall [*F.*].
Conference with the Lord Mayor on the future of the Crystal Palace	Mr. Wm. Woodward [*F.*]. Mr. Edwin T. Hall [*F.*].
The Royal Sanitary Institute Congress, York, 1912	Mr. Edwin T. Hall [*F.*]. Mr. John Slater [*F.*].
Smoke Abatement Conference, Manchester	Mr. Percy Worthington [*F.*]. Mr. Edgar Wood [*F.*]

Conference with representatives of the English Forestry Association	Mr. Alan E. Munby [*A.*]. Mr. Ernest Flint [*F.*]. Mr. Max Clarke [*F.*].
Court of the University of Liverpool (three years)	Mr. Henry Hartley [*F.*].
Inaugural Meeting of the London Society	Mr. H. W. Wills [*A.*].
National Conference on Details of Town Planning Administration	Mr. Raymond Unwin [*F.*].
250th Anniversary of the Foundation of the Royal Society	President for the time being.
Council for the National Registration of Plumbers	Mr. H. D. Searles-Wood [*F.*].

Grants. Since the issue of the last Annual Report the Council have made the following grants :—

1. Library Fund, £150.
2. Architectural Association, £100.
3. Architects' Benevolent Society, £100.
4. Architectural Assoc. Sketch Book, £25.
5. Royal Architectural Museum, £21.
6. British School at Rome, £21.
7. British School of Archæology (work in Egypt), £10.
8. Incorporated Joint Committee on Water Regulations, £5 5*s*.

Competitions. The Competitions Committee have had under their consideration the conditions issued by various promoters, and in cases where the conditions have been unsatisfactory, the promoters have been communicated with and urged to modify them. In the case of the Competitions for the Australian Federal Capital, Oakwood Avenue Council School, Warrington, and Blackwood Hall, the Committee's efforts to obtain satisfactory amendment of the Conditions having been unavailing, the Council by publication in the JOURNAL and in the professional Press have warned members and Licentiates not to take part in them.

The following have been the President's nominations to Assessorships during the official year :—

Cardiff	Technical Institute	Mr. James S. Gibson.
Cardiff	New Fire Brigade Station	Mr. A. Marshall Mackenzie.
Dovercourt	School	Mr. Paul Waterhouse.
East Sussex	New Hospital	Mr. Edwin T. Hall.
Felixstowe	Church	Mr. Gerald C. Horsley.
Harrow-on-the-Hill	Enlargement and Alterations of Public Offices	Mr. William Flockhart.
Marylebone	Town Hall	Mr. Henry T. Hare.
Newcastle (Walker Gate)	School	Mr. John Bilson.
Northwich	New Baths	Mr. F. T. Baggallay.
Nottingham (Carrington)	Parish Church	Mr. E. S. Prior.
Nottingham	Baptist Chapel	Mr. Herbert W. Wills.
Portland	New Council Offices	Mr. A. Needham Wilson.
Stockport	New Infirmary Buildings	Mr. Herbert W. Wills.
Wallsend-on Tyne	Elementary Schools	Mr. A. W. S. Cross.
Willesden	New Buildings for Children	Mr. A. W. S. Cross.

The President accepted an invitation from the Government of Manitoba to act as Assessor in the Competition for the new Legislative Buildings at Winnipeg.

Copies of the "Regulations" have been sent to the promoters of the following Competitions, together with letters requesting that a copy of the Conditions be sent for the Royal Institute Library :—

Armadale : Public Hall and Offices.
Australia : Federal Capital.
Banbury : Workmen's Dwellings.
Barnsley : Extension of Public Baths.
Birmingham : New Public Baths.
Blackwood : Hall.
Bristol : Alterations to Grand Hotel.
Cathays Park, Cardiff : Technical Institute.
Coseley : Council School.
"Daily Mail" : Ideal Country House.
Düsseldorf : Extension of the City of Düsseldorf.
Egremont : Laying out of Building Sites.
Evesham : Cottages under the Evesham Rural District Council.
Finnart : New School.
Harrow : Enlargement and Alterations of Public Offices.
Hastings : Hospital.
Hastings : Sunk Arena and Bandstand.
Liverpool : Pierhead Baths.
Llandudno : New Police Buildings.
Marylebone : Town Hall.
Montevideo : Government Palace and Town Improvements.
Newton Abbot : Seale-Hayne College.
Norwich : Plans of Houses and Buildings for Small Holdings. (Competition held by Royal Agricultural Soc.)
Ormskirk : Golf Club.
Padiham, Lancs. : Laying out of land for a Town Hall, Public Offices, &c.
Portland : New Council Offices.
Prestatyn, North Wales : Laying out of Estate.
Rochdale : Extensions to Infirmary.
Salford : Extension of Office Accommodation on Workhouse Site, Eccles New Road.
Spennymoor : Public Hall, Market and Offices, &c.
Stafford : Public Library.
Swansea : Parish Hall.
Trinity Square : New Head Offices (Port of London Authority).
Warrington : Council School.
Wellington, N.Z. : New Parliament Buildings.
Welsh Eisteddfod : Designs for Workmen's Dwellings, Welsh Housing Association.
Willesden : New Buildings for Children.
Yeovil : Laying out a Site and Erection of Houses thereon.

REPORT OF THE BOARD OF ARCHITECTURAL EDUCATION.

The Board has held fifteen Meetings since the issue of the last Report. Mr. Reginald Blomfield has acted as Chairman, Sir Aston Webb and Mr. Lewis Solomon as Vice-Chairmen, Messrs. Ernest Newton and John Slater as Honorary Secretaries. The following Committees have met and reported to the Board:—Officers, Examinations, Exemptions, Testimonies of Study, Designs.

In November 1911 the Council approved of a recommendation of the Board that the Slade Professors of Fine Art at the Universities of Oxford and Cambridge, and Professor Beresford Pite, of the Royal College of Art, should be invited to become Advisory Members of the Board, and the Board's invitation was accepted by these gentlemen.

Licentiates' Examination.—The Board has drawn up a detailed scheme, which has been approved by the Council, for the examination of Licentiates desirous of becoming Fellows, and the first Examination will be held at the end of June. The Examiners appointed to conduct the first Examination are:—

Mr. Reginald Blomfield, A.R.A. (Chairman of the Board).
Sir Aston Webb, C.B., C.V.O., R.A. (Past President).
Mr. Henry T. Hare (Hon. Secretary).

Examinations.—The Board has conducted the Royal Institute Examinations, and the results as reported to the Council have been published.

Revision of Examinations.—The Board has had under consideration a revision of the syllabus of the Intermediate and Final Examinations. Many important modifications therein have been made and approved by the Council.

A scheme of problems in design has been instituted to take the place of the old Testimonies of Study for the Final Examination, and the first sets of drawings were submitted for the approval of the Board at the end of February. Other designs will be sent in every two months, and each candidate for the Examination is required to submit four of such approved designs as Testimonies of Study before being admitted to the Examination. The Allied Societies are co-operating with the Board in carrying out this scheme by examining the designs in their respective localities. Eighteen sets of designs for the first subjects set by the Institute have been received by the Board, and eight of them have been approved. The Board has selected some of these approved designs and has sent them to the Allied Societies as examples of the work done by Students in answer to the design problems.

The various alterations in the Examinations, full particulars of which have been published in the *Kalendar*, will come into operation in November next.

External Examiners.—The Board has recommended the Council to require that the work of Students at the recognised Architectural Schools who claim exemption from the Intermediate Examination shall have been examined and approved by an External Examiner appointed by the School, such appointment having been previously approved by the Council. This recommendation has been approved by the Council, and a communication embodying this decision has been sent to the heads of the various Universities and Schools.

Architectural Scholarship, Rome.—A Committee of the Board, appointed at the request of the Council, has drawn up a scheme for the award and tenure of a Scholarship in Architecture instituted by the Royal Commissioners of the 1851 Exhibition, and the scheme has been approved by the Commissioners.

Prizes and Studentships.—The Board appointed Committees—comprising several members of the Institute outside the Board itself—to judge the various designs and drawings submitted for the Institute and other Prizes, and reported thereon to the Council. The

pamphlet of the Prizes and Studentships for the ensuing year, prepared by the Board, has been approved by the Council.

The Board desire to draw special attention to the valuable new Studentship which the "Jarvis Bequest" has enabled the Institute to found. A scheme for this Studentship has been drawn up by a Sub-Committee and has been approved by the Board and forwarded to the Council.

REPORT OF THE ART STANDING COMMITTEE.

Seven meetings of the Art Committee have been held since the submission of the last Report.

Mr. Ernest Newton, A.R.A., has acted as Chairman, Mr. W. Flockhart as Vice-Chairman, and Messrs. W. Tapper and Mr. W. A. Forsyth as Honorary Secretaries.

Of the numerous matters which received the consideration of the Committee, the following are the most important:—

Reference was made in the previous Report to the Sir R. Geffrey Almshouses at Shoreditch, St. Paul's Bridge, and minor improvements in London.

It is satisfactory to record the successful issue of the Committee's efforts on behalf of the almshouses.

The recommendations of the Council on the subject of the new St. Paul's Bridge were adopted by the City Corporation and expert advice was taken on the whole matter.

The subject of the uniform treatment of street name-plates in London has been further dealt with, and the Council of the Royal Institute have obtained an expression of opinion on the matter from Borough and City Councils in London. These opinions, although not unanimously in favour of a uniform treatment, were generally sympathetic. Representatives of all the civic authorities of London have been invited to a conference to be held on the Institute premises, to discuss the matter.

The Committee's enquiries were directed towards the matter of the "English" bridge at Shrewsbury. The Corporation of that town have decided to widen the bridge and not to replace it with a new structure. The threatened demolition of an extremely interesting half-timber house in the same town is now engaging the attention of the Committee.

The Committee have been engaged upon the consideration of the injurious effect of public hoardings upon English landscapes. At the suggestion of the Committee, the Council expressed its approval of the efforts made in this direction by the New Malden, Surrey, District Council.

The Society for Checking the Abuses of Public Advertising invited the Royal Institute to criticise and make suggestions upon the Bill, which it is about to promote in Parliament, to extend the existing Advertisements Regulation Act. The Art Committee recommended the Council to lend the weight of their general support to the measure.

The King Charles I. Equestrian Statue at Charing Cross has for some time engaged the attention of the Committee, who are formulating proposals for the erection of a plaster cast in South Kensington Museum.

The sale of Tattershall Castle and the subsequent removal of the stone mantelpieces once again emphasised the necessity for adequate legislation for preventing such regrettable occurrences. The Committee urged the Council of the Royal Institute to invite the co-operation of other learned societies, with a view to formulating legal procedure to prevent the defacement of historic buildings or monuments. The National Trust for Places of Natural Beauty, desiring to take similar action, invited various societies to discuss the question. A conference was held which the President of the Royal Institute and a representative of the Art Committee attended. A draft measure extending the powers conferred by the existing Ancient Monuments Act was prepared, and is about to be presented to Parliament.

The recent proposal made by his Majesty's Government to decentralise the Department of Archæology in India was considered by the Committee to be detrimental to the effective control and the preservation of the ancient monuments of that country. A memorial was prepared for the consideration of the Institute Council, and was forwarded to the Secretary of State, urging that no change be made in the existing organisation. It is gratifying to record that this view of the matter has been adopted by the Government.

The intention of the Trustees of the Corsham Almshouses in Wiltshire to dispose of their property, on the ground that the income is insufficient to meet the cost of maintenance, was brought to the notice of the Committee. A good deal of expert, practical information was obtained and laid before the Council. The Secretary of the Royal Institute was instructed to write to the Charity Commissioners that the Council hoped that no alterations would be made to the existing buildings.

The Committee have at various times been engaged in preparing proposals for holding exhibitions of architecture in the Royal Institute Galleries.

REPORT OF THE LITERATURE STANDING COMMITTEE.

Nine Meetings have been held since the election of the present Committee.

At the beginning of the Session the following officers were elected: Mr. Edward Warren, F.S.A., Chairman; Mr. Charles E. Sayer, Vice-Chairman; Messrs. P. Leslie Waterhouse and Theodore Fyfe, Honorary Secretaries.

At the request of the Council the Committee have submitted recommendations for Sessional Papers for the coming Session.

The recommendation of the Committee, adopted by the Council, that the Webb drawings at Worcester College, Oxford, should be photographed, has been now carried into effect. Mr. Gotch, who undertook the selection of the drawings to be photographed, has also prepared a catalogue of this important collection, which will be published in the JOURNAL.

At the request of the Council the Committee have appointed a Sub-Committee, to be called the JOURNAL and KALENDAR Committee, to assist and advise the Secretary and Editor in all matters connected with these two publications, and to make recommendations to the Council from time to time with regard to them. A further Sub-Committee has also been appointed to consider the question of the valuation of the contents of the Library for Fire Insurance. This matter is at present under consideration, as well as a scheme for providing more adequate safeguards for the protection of the Library against fire.

In view of the lack of space for the accommodation of folio volumes, the Committee have made a recommendation to the Council with regard to the alteration of some of the bookcases in order to meet this difficulty.

At the request of the Committee the Assistant-Librarian has undertaken to compile in his leisure time an annotated catalogue of the Burlington-Devonshire Collection of Drawings.

The purchase of new books as well as many valuable presentations to the Library has been published quarterly in the Supplements to the JOURNAL. The more important of these, as well as the Library statistics for the year, are recorded in the Librarian's Report which follows:—

During the twelve months ending the 31st March of the present year 574 volumes and 66 pamphlets have been added to the Library of the Royal Institute, exclusive of periodicals, reports, and Transactions of Societies, and parts of works issued in serial form.

The number of works presented was 458 volumes and 66 pamphlets.

The number of works purchased comprised 116 volumes, of which 42 were added to the Loan Library.

The attendance of readers in the Reference Library numbered 5,554.

The number of books issued on loan was 3,786.

The number of tickets issued for admission to the Library, other than to members of the Institute or to Students and Probationers, was 68.

The number of books issued through the post was 321.

With regard to the statistics for the issue of books on loan, the number of readers would be no doubt increased if the Loan Library possessed a larger number of copies of works which are in special request.

LIBRARY STATISTICS, 1911–12.

Date	Day Attendances.			Evening Attendances.			Books issued on Loan.
	Members.	Non-Members.	Total.	Members.	Non-Members.	Total.	
1911.							
April	117	150	267	50	95	145	347
May	151	218	369	98	146	244	396
June	98	157	255	38	84	122	308
July	105	149	254	15	54	69	220
August	Reference Library closed.			Reference Library closed.			113
September	124	169	293	71	88	159	321
October	177	197	374	76	96	172	383
November	176	218	394	129	138	267	406
December	157	153	310	75	79	154	248
1912.							
January	199	193	392	103	122	225	346
February	159	196	355	68	130	198	362
March	146	185	331	79	126	205	336
Total	1,609	1,985	3,594	802	1,158	1,960	3,786

Special presentations to the Library have been received as follows:—

From Mrs. Arthur Cates: A mahogany cabinet containing over a thousand architectural photographs of buildings in Italy, Sicily, Greece, Turkey, Egypt, France, and Germany. This collection is intended to form part of the Arthur Cates Collection (space for which has now been found in the Library vestibule), to which Mrs. Cates has also contributed additional volumes, as well as a framed photograph of Mr. Arthur Cates.

From the executors of the late Henry Jarvis: A large collection of books and pamphlets (324 volumes), including Clayton's *Works of Sir Christopher Wren*, Sauvageot's *Palais, Châteaux et Maisons de France*, Texier and Pullan's *Byzantine Architecture*, Campbell's *Vitruvius Britannicus*, and the A.P.S. *Dictionary of Architecture*.

The interleaved heirloom copy of Wren's *Parentalia* with manuscript insertions, purchased by special subscription, was presented by Mr. Lawrence Weaver at the Institute meeting of the 26th June 1911 (*see* JOURNAL, Vol. XVIII., p. 569).

From Miss Lynam, niece of the late T. M. Rickman: A large collection of original drawings by Thomas Rickman, H. Hutchinson, R. C. Hussey, and T. M. Rickman, with a collection of books which includes the Dilettanti Society's *Antiquities of Ionia*, Wood and Dawkins' *Ruins of Palmyra and Baalbec*, Lewis's *Topographical Dictionary of Great Britain and Ireland*, Adam's *Spalatro*, Brindley and Weatherley's *Sepulchral Monuments*.

The Dilettanti Society, through Mr. George Macmillan and Mr. Theodore Fyfe: A collection of original drawings with proof etchings, prepared for the volumes of *Antiquities of Ionia* published by the Society.

H.M. Office of Works: Reproductions of the designs of various competitors for the Royal Courts of Justice.

Comte Robert de Lasteyrie: A copy of his work entitled *L'Architecture religieuse en France à l'époque romane, ses origines, son développement.*

Mr. J. D. Crace: Original drawings, by William Kent (4 sheets).

Mr. Walter Stirrup: A collection of manuscripts of Sir William Chambers, including notes for various Academy lectures.

Donations of books or pamphlets have also been received from Professor G. Baldwin Brown, Mr. William Dunn, Mr. William H. Goodyear, Mr. Benj. Ingelow, Monsieur F. de Dartein, Mr. Thomas H. Mawson, Signor A. M. Cattaneo, Mr. Lawrence Weaver, Mr. John Bilson, Herr Martin Dülfer, Herr Otto Wagner, Mr. Raymond Unwin, Mr. C. E. Sayer, Signor Eugenio Arsoni, Mr. Arthur T. Bolton, Monsieur C. Nizet, and Mr. A. E. Bullock.

Amongst other books purchased or acquired during the year the following may be mentioned: Sir Thomas Elyot's *The Boke named the Governour* (1546), containing the autographs of Dean Christopher Wren and Sir Christopher Wren; a facsimile copy of Inigo Jones' *Sketch Book*; Magni's *Il Barocco a Roma*; Brière's *Le Parc de Versailles*; Blomfield's *History of French Architecture*; Burckhardt's *Der Cicerone*; Camille Martin's *L'Art roman en France*; Rickards' *The Ruins of Mexico*; Ward's *Architecture of the Renaissance in France*; Field & Bunney's *English Domestic Architecture of the Seventeenth and Eighteenth Centuries*; Klopfer's *Von Palladio bis Schinkel*; Gromort's *Choix d'Eléments empruntés à l'Architecture Classique*; Contet's *Documents de Ferronnerie ancienne*; Gurlitt's *Die Baukunst Konstantinopels*; Deshairs' *Le Château dè Bercy*; Harvey, Lethaby, and others, *The Church of the Nativity at Bethlehem*; Fouquier's *De l'Art des Jardins du XV^e^ au XX^e^ siècle*; Gusman's *L'Art décoratif de Rome de la fin de la République au IV^e^ siècle*; Ducher's *Dévantures de boutiques et installations de magasins*; Ricci's *Baroque Architecture and Sculpture in Italy*; Simpson's *History of Architectural Development*, vol. 3; Baldwin Brown's *The Arts and Crafts of our Teutonic Forefathers*; *Transactions of the Town Planning Conference*, 1910; *Enlarged Photographs of Building Stones*, arranged by the Science Standing Committee, R.I.B.A.; *The Composition and Strength of Mortars*, prepared by W. J. Dibdin for the Science Standing Committee; Second Report of the Joint Reinforced Concrete Committee, R.I.B.A.

REPORT OF THE PRACTICE STANDING COMMITTEE.

Since the date of the last Annual Report ten Ordinary and two Special Meetings have been held.

At the commencement of the new Session the following officers were elected:—Chairman, Mr. H. D. Searles-Wood; Vice-Chairman, Mr. Wm. Woodward; Honorary Secretaries, Messrs. Herbert A. Satchell and Matt. Garbutt.

Owing to the operation of the new By-law 51, which restricts the time service of members on Standing Committees, the Committee have no less than fifteen new members this Session out of a total of twenty-one, and, in compliance with the provision of the same By-law, the Council are represented on the Committee in the person of the Vice-Chairman.

Since the date of the last Annual Report, but prior to the end of last Session, the Sub-Committee which had been engaged on the question of revising the Schedule of Charges and had very carefully dealt with the suggestions made in reply to the Circular sent out by the Council to all members of the Institute, presented their Report. The proposed new Schedule drawn up by them, after being carefully considered by the Committee, was forwarded to the Council with an urgent recommendation for its adoption at as early a date as possible. A special vote of thanks was accorded to the members of the Sub-Committee, viz. Messrs. W. H. Atkin-Berry (Chairman), W. Henry White, George Hubbard, Ernest Flint, and Edward Greenop (Honorary Secretary), for the exceptional amount of time and trouble they had devoted to the subject. During the current Session the members of the Sub-Committee have been invited to meet the Committee of the Council appointed to consider and report upon the matter, and the proposed new Schedule is now receiving the consideration of the Council. The importance of removing some of the admitted deficiencies of the existing Schedule is emphasised by the fact that, of the large number of difficulties arising in practice which have been brought before the Committee, at least one-third have dealt with questions of professional charges.

As an outcome of many difficulties experienced by members, arising out of the use of the R.I.B.A. Conditions of Contract, of recent legal decisions affecting the liability of architects

under these Conditions, and of certain suggestions made by Messrs. Edwin T. Hall and Max Clarke, the Council, towards the end of last Session, referred to the Committee the question of the advisability of amending the existing Conditions of Contract, and especially the clauses dealing with P.C. amounts and provisional sums. The Committee appointed a Sub-Committee to deal with the matter, consisting of Messrs. Wm. Woodward (Chairman), Max Clarke, Edward Greenop, H. H. Langston, and A. W. Moore (Hon. Secretary). At the commencement of the new Session, under a standing order of the Council providing that members of Sub-Committees might continue to act as consultative members of Standing Committees though no longer eligible to serve on such Committees, the Sub-Committee was reappointed, and at their request Mr. W. Henry White, who as late Chairman of the Committee had taken an active interest in the matter, was co-opted as an additional member. During the current Session a very large number of additional difficulties arising out of the existing Conditions have been brought before the Committee, and these have in most cases been referred to the Sub-Committee, the scope of whose reference has accordingly been considerably extended. Arising out of these questions the Committee, on the suggestion of the Sub-Committee, have recommended to the Council the desirability of obtaining a legal opinion on the relative duration of architects' and contractors' liability under the Statute of Limitations. This has only just been received and is now being considered by the Sub-Committee. The Sub-Committee have presented an interim report in which they state that they have held eighteen meetings. They are going most carefully into the whole matter and are taking evidence in connection with various points of difficulty which have presented themselves. It is hoped that their complete Report may be presented by the end of the Session.

By the courtesy of members of the American Institute of Architects, the Committee have been favoured with copies of the standard documents relating to contracts, &c., which have recently been issued by that Institute, and these are being carefully considered by the Sub-Committee.

It having been brought to the knowledge of the Committee that the London Master Builders' Association is endeavouring to draw up a new form of Agreement between Contractors and Sub-Contractors, a Special Meeting of the Committee was held at which a deputation from the Association was invited to be present. The Chairman, Secretary, and several members of Council of that body accordingly attended. They explained the difficulties at present existing in regard to the subject and the direction in which they were trying to overcome them. A general discussion followed in which a useful interchange of views took place.

On the invitation of the Council the Committee undertook the arrangements for a General Meeting, which was held on the 18th December. The subject for discussion was: "The Newer Responsibilities of Architects, and the need of defining such responsibilities with a view to publishing on behalf of members of the Institute a guide to practice." Four Papers were prepared by present and past members of the Committee, viz.: Messrs. W. Henry White, Edward Greenop, William Woodward, and A. Saxon Snell. Owing to time limits only the first two papers were then read. A short discussion followed and the Meeting was adjourned to the 15th April, when Mr. Saxon Snell's Paper was read (Mr. Woodward's Paper dealing with a particular matter which is still *sub judice* not being available*), and the discussion was concluded.

Apart from the questions dealing with Professional Charges and Conditions of Contract already referred to, numerous difficulties arising in practice have come before the Committee. A suggestion has been made to the Committee with a view to the publication in the JOURNAL of the results of its deliberations for the benefit of members generally, and this is now under consideration, but the fact that most of the questions received are necessarily confidential in

* The matter in question has since been settled, and Mr. Woodward's Paper, entitled "The Responsibilities of Architects and the case of *Minter* v. *Waldstein*," will be read at an Extra Meeting to be held on the 3rd June.

character creates some difficulty in its adoption. The Committee have, however, been instrumental in securing the publication in the JOURNAL of an important legal decision dealing with certificates,* and also of a Paper† read before a local society.

The Committee adhered to their practice, especially in the case of questions submitted to them by solicitors, and laymen, of giving no opinion on *ex parte* statements and matters *sub judice*, seeing that such advice might prove extremely detrimental to brother professionals.

REPORT OF THE SCIENCE STANDING COMMITTEE.

Since the issue of the last Report eight Meetings have been held, at which the average attendance has been eleven. Mr. Alan E. Munby was elected Chairman, Mr. F. R. Farrow Vice-Chairman, and Messrs. Wonnacott and Digby Solomon, Hon. Secretaries.

Skeleton Frame Buildings.—In the last Annual Report of the Science Standing Committee reference was made to the draft of a uniform scheme for preparing the necessary particulars and calculations to be submitted to District Surveyors under the provisions of the various London Building Acts, 1894-1909. During the year that has passed this scheme has been fully considered, and the Committee have now finally approved the suggestions of the District Surveyors' Association governing the deposit of drawings and calculations with District Surveyors in connection with skeleton frame buildings. These suggested regulations have been published by the District Surveyors' Association in folio, giving in a cheap and handy form the requirements of the latest Act, explanatory particulars of the formulæ and symbols to be employed, working stresses, weights of materials, load tables for standard sections of beams and stanchions, and diagram sheets on which may be set out the calculations in detail for easy reference. Members of the Institute will appreciate the utility of this compact publication, copies of which may be obtained from the District Surveyors' Association or their printers.‡

Research on Building Materials.—The approval given by the Council at the close of last Session to the effort of the Committee to promote research on materials in matters affecting the profession has led to correspondence with the Imperial Technical College and interviews with the Rector and Professors. At an early stage in the negotiations it was found hopeless to expect State aid to further the object of the Committee, but it has been definitely ascertained that facilities would be afforded by the Imperial Technical College, as the leading technical institution, if some scheme of study and research could be agreed upon. The draft of a scheme prepared by the College has recently come before the Committee and is now under their consideration, but this having been put forward by the College as suggestive only and intended to form the basis of further discussion, it may be some time before the Committee will be able to report finally upon a satisfactory conclusion of its labours with regard to research.

Mortar Tests.—The volume mentioned in last year's statement of this Committee, containing the Report and data of the series of tests, which extended over two years, has now been published under the auspices of the Science Standing Committee, with the generous support of the Council. This Report should be in the hands of all members, as it forms a publication which will be found extremely useful to the profession at large, and contains much valuable matter and numerous diagrams. Being the latest of the R.I.B.A. series of publications, it is therefore obtainable by members from the Institute. The Committee wish to place on record their appreciation of the assistance given by the Council to their experiments and in the publication of the Report referred to.

Monograph on Paints.—The issue of the monograph, "Notes on the Properties and

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* *Thomas Free* v. *Sutton District Council* (JOURNAL, 24th February 1912).

† "The Law as to Support for Buildings," by J. H. Cockburn, Solicitor (JOURNAL, 9th March 1912).

‡ Messrs. Merritt & Hatcher, Ltd., 2 Grocers' Hall Court, E.C.

Ingredients of Commercial Paints," compiled by the Science Standing Committee, has been amply justified by the large sale of copies. Again the Committee have to thank the Council for their valuable aid in putting before the profession much important matter in a concise and handy form, and the interest shown in the issue of this pamphlet by manufacturers and the trade generally is an indication of the importance of the subject and the utility of its consideration when the Council first seeks the advice of experts, and then generously gives its assistance in a material form by putting before the profession the benefit of such expert opinion.

The Use of English Timber.—A movement initiated by the English Forestry Association to promote the use of home-grown timber, and foster the industries connected with it, led to a Conference on the 20th February last between the representatives of that body and four delegates appointed by the R.I.B.A. Council, viz. Messrs. Max Clarke, Ernest Flint, Alan E. Munby and Wonnacott. One Meeting only having been held, the Committee will, after further discussion, be able to report the result of these deliberations to the Council.

Incorporated Joint Committee on Water Regulations.—A reference from the Council to the Committee has resulted, after enquiry and correspondence, in the Institute ceasing to be represented on this body.

Among minor matters dealt with in the course of the Session, on which advice has been sought or which are still under investigation, may be mentioned :—

(*a*) *Defects in Roofing Tiles*, particularly machine-made varieties. Specimens, with information bearing on them, are being collected from various quarters. The Committee gratefully record the offer of assistance from Mr. H. Greville Montgomery, who has promised a collection of defective tiles and to assist with information in every way possible.

(*b*) *Valve Closets.*—As some public authorities have recently taken up the attitude of condemning this pattern of fitting as out of date, the Committee have been unable to support this view, as the alleged defects arise from removable causes and not from the design of the apparatus.

(*c*) *Preservation of Decayed Stonework.*

(*d*) *Corrosion of Pipes and Tanks* by moorland waters, on which the Committee hope shortly to issue a brief statement.

(*e*) *South African Marbles and Building Stones;* and

(*f*) *Decay of Lead Dressings on Roofs.*

In conclusion, the Committee, while wishing to gratefully record its appreciation of the support afforded by the Council to its deliberations, feel it necessary to point out that nearly all the matters submitted to its consideration require investigations of an experimental nature, and that this involves some financial outlay. In the nature of things, this appears to be more requisite in the case of the Science Standing Committee than in that of other Committees, and the sphere of usefulness and value of the honorary services of its members would be greatly increased were even a moderate sum annually available for expenditure. With the recent large growth of the Institute roll of members, the field of influence of all the Standing Committees has been increased, and it is earnestly hoped the Council may give this matter its careful consideration.

FINANCES.

The Accounts of Ordinary and Trust Funds for 1911 prepared by Messrs. Saffery, Sons and Skinner, Chartered Accountants, and audited by Messrs. John Hudson [*F.*] and William H. Burt [*A.*], *Hon. Auditors*, here follow :—

Income and Expenditure Account of Ordinary Funds for the Year ended 31st December 1911.

Dr. Exclusive of Entrance Fees, Final Examination Fees, and Subscriptions in advance. **Cr.**

EXPENDITURE.	£	s.	d.	£	s.	d.
To Ordinary Expenditure—						
Rent	1740	5	0			
Gas and Electric Lighting	130	11	9			
Coals	57	16	7			
				1928	13	4
Salaries				2725	3	7
General Printing, Stationery, Stamps, and Petty Expenses				1330	7	2
General Meetings and Exhibitions				339	0	10
Housekeeping				344	3	1
Advertisements				97	2	6
Examination Expenses				331	9	10
General Repairs				142	0	6
Fire Insurance				36	2	9
Medals and other Prizes				82	16	6
Grant to Library	150	0	0			
Grant to Architects' Benevolent Society	100	0	0			
Grant to Architectural Association	100	0	0			
Grant to Architectural Association Sketch Book	25	0	0			
Grant to Royal Architectural Museum	21	0	0			
Grant to British School at Rome	21	0	0			
Grant to Sheffield Society for the Department of Architecture	12	10	0			
Grant to British School of Archæology, Egypt	10	0	0			
Grant to Joint Committee Water Regulations	5	5	0			
				444	15	0
The Journal—						
Reporting	47	18	6			
Printing and Binding	1384	2	4			
Illustrations	161	18	2			
Addressing, Postage, and Carriage	523	15	0			
				2117	14	0
The Kalendar—						
Printing	398	0	10			
Postage and Carriage	52	14	5			
				450	15	3
Contributions to Allied Societies				449	3	6
Miscellaneous Expenses—						
Legal and Accountants' Charges	377	2	6			
Presidents of Allied Societies	79	10	10			
President's Portrait Fund (Sir Ernest George)	58	14	0			
Telephone	32	9	8			
Subscription to Comité Permanent	15	4	0			
Sundries	98	18	5			
				661	19	5
Extraordinary Expenditure—						
Town Planning Conference	1675	16	9			
Coronation	117	10	0			
Mortar Tests	115	3	9			
Concrete Report	67	11	0			
Rome Congress	56	0	0			
St. Paul's Bridge Bill	44	0	4			
Expenses *re* Licentiates' Class	40	9	2			
Science Committee	30	5	0			
				2146	16	0
Interest on Loan				242	1	6
Dinner (deficit)				105	10	0
				£13975	14	9

INCOME.	£	s.	d.	£	s.	d.
By Ordinary Income—						
Subscriptions—						
825 Fellows at £4 4s.	3465	0	0			
1 Ditto, on account	2	2	0			
Ditto Arrears	130	4	0			
Ditto Reinstated	8	8	0			
1394 Associates at £2 2s.	2927	8	0			
1 Ditto, on Account	2	0	0			
Ditto Arrears	128	3	0			
48 Hon. Associates at £2 2s.	100	16	0			
Ditto Arrears	8	8	0			
1638 Licentiates at £1 1s.	1719	18	0			
Ditto Arrears	1	1	0			
				8493	8	0
Journal and Kalendar—						
Advertisements	1000	0	0			
Sales of Journal and other Publications	680	17	2			
				1680	17	2
Examination Fees—						
Statutory	30	9	0			
Preliminary	411	12	0			
Intermediate	541	16	0			
Special and Final (forfeited)	450	7	0			
Licentiates	25	4	0			
				1459	8	0
Use of Rooms—						
R.I.B.A. Tenants	79	7	6			
Galleries	101	6	6			
				180	14	0
Deficit for the year 1911 carried to Balance Sheet				2161	7	7
				£13975	14	9

Saffery, Sons & Skinner,
Chartered Accountants.

Examined with the vouchers and found to be correct. *3rd April* 1912. { John Hudson [*F.*]. / William H. Burt [*A.*].

Balance Sheet of Ordinary Funds, 31st December 1911.

Dr. **Cr.**

LIABILITIES.	£	s.	d.	£	s.	d.
To Sundry Creditors				2335	18	8
Bank Overdraft				9227	3	8
Examination Fees anticipatory of election				363	8	0
Subscriptions received in advance				177	9	0
Accumulated Fund—						
Balance as per last Account	£22647	2	10			
Add Charitable Fund	969	14	7			
Travelling Fund	1385	4	0			
Entrance Fees in 1911—						
Fellows £39 18 0						
Associates 368 11 0						
	408	9	0			
Arrears for 1911 (as *per contra*)	443	2	0			
Dividends on Stocks sold 1910	45	15	11			
	25899	8	4			
Less Arrears for 1910, since received or cancelled 317 3 0						
Furniture and Fittings bought 131 15 7						
	448	18	7			
	£25450	9	9			
Less Deficit of Income and Expenditure Account for 1911	2161	7	7			
				23289	2	2
				£35393	1	6

ASSETS.	£	s.	d.	£	s.	d.
By *Investments at cost*—						
1037 Shares, Architectural Union Co.				15251	1	0
New Premises—						
As per last Balance Sheet	19216	6	2			
Add Expenditure in 1911	210	0	0			
				19426	6	2
Debtors, Rent, Advertisements, &c.				206	13	4
Subscriptions in Arrear for 1910	65	19	0			
Ditto 1911	443	2	0			
				509	1	0
				£35393	1	6

Note.—A fine of £7 per annum is payable every 14 years by the Architectural Union Co., Ltd., in respect of the premises held by them under a Lease from the Corporation of the City of London. Notice of renewal must be given at Michaelmas, 1921, and the fine of £98 paid. All the Shares of the Architectural Union Co., Ltd., are held by the R.I.B.A. or its nominees, as shown in the above and Trust Funds Balance Sheet.

Saffery, Sons & Skinner,
Chartered Accountants.

Examined with the vouchers and found to be correct. *3rd April* 1912. { John Hudson [*F.*]. / William H. Burt [*A.*].

Revenue Accounts of Trust Funds for the Year ended 31st December 1911.

Dr.	£ s. d.	Cr.	£ s. d.
Ashpitel Prize Fund:—			
To Cost of Ashpitel Prize [Mr. I. B. F. Cowper] [*A.*]	10 0 0	By Balance from last Account	55 15 10
To Balance carried forward	45 15 10		
	55 15 10		55 15 10
Anderson and Webb Fund:—			
To Amount Paid, Visitors' Travelling Expenses	2 9 0	By Balance from last Account	165 3 7
To Balance carried forward	162 14 7		
	165 3 7		165 3 7
Arthur Cates Legacy:—			
To Amount paid Prizeman [Mr. A. G. Henderson] [*A.*]	42 0 0	By Balance from last Account	68 4 0
To Balance carried forward	69 17 10	By Dividends on £1160 4 per Cent. N.-E. Railway Preference Stock	43 13 10
	111 17 10		111 17 10
Donaldson Testimonial Fund:—			
To Cost of Medal	1 7 6	By Balance from last Account	13 0 9
To Balance carried forward	14 5 3	By Dividends on £72 L. & N.-W. Railway 4 per Cent. Consolidated Preference Stock	2 12 0
	15 12 9		15 12 9
Godwin Bursary:—			
To Amounts paid, viz.:—		By Balance from last Account	58 14 8
Mr. Cecil Brewer [*F.*]	20 0 0	By Dividends on £1030 Caledonian Railway 4 per Cent. Stock	38 16 0
Mr. W. Milburn [*A.*]	20 0 0		
To Balance carried forward	57 10 8		
	97 10 8		97 10 8
Grissell Legacy:—			
To Balance from last Account	3 4 3	By Dividends on £20 0*s.* 8*d.* "B" Annuity Great Indian Peninsula Railway	13 10 3
To Balance carried forward	10 6 0		
	13 10 3		13 10 3
Library Fund:—			
To Purchase of Books, Binding, &c.	158 3 9	By Balance from last Account	23 5 6
To Petty Expenses	4 15 7	By Annual Donation from Mr. Sydney Smirke	5 0 0
To Balance	24 8 8	By Annual Grant from Ordinary Funds	150 0 0
		By Entrance Fees of Hon. Associates	6 6 0
		By Fines, &c. (Loan Library)	2 16 6
	187 8 0		187 8 0
Owen Jones Studentship:—			
To Amounts paid, viz.:—		By Balance from last Account	147 12 2
Mr. A. W. Bellis	50 0 0	By Dividends on £2128 Midland Railway 2½ per Cent. Stock	50 2 0
Mr. W. O. Miller	50 0 0	By Dividends on £1247 Great Western Railway 5 per Cent. Consolidated Stock	58 14 3
To Balance carried forward	156 8 5		
	256 8 5		256 8 5
Pugin Memorial Fund:—			
To Balance from last Account	13 1 8	By Dividends on £1070 L. & N.-W. Railway 4 per Cent. Consolidated Preference Stock	40 8 2
To Amount paid Mr. H. H. Fraser	20 0 0		
To Cost of Medal	1 9 6		
To Balance carried forward	5 17 0		
	40 8 2		40 8 2
Saxon Snell Bequest:—			
To Balance carried forward	140 7 9	By Balance from last Account	117 7 7
		By Dividends on £698 4*s.* New Zealand 3½ per Cent. Stock	23 0 2
	140 7 9		140 7 9
Tite Legacy Fund:—			
To Balance carried forward	30 9 9	By Balance from last Account	3 9 2
		By Dividends on £1150 2½ per Cent. Consols	27 0 7
	30 9 9		30 9 9
Wimperis Bequest:—			
To Cecil Brewer [*F.*]	12 10 0	By Balance from last Account	129 15 7
To W. Milburn [*A.*]	15 0 0	By Dividends on £1024 18*s.* 8*d.* Metropolitan Water Board Stock	28 19 0
To Balance carried forward	131 4 7		
	158 14 7		158 14 7

Saffery, Sons & Skinner,
Chartered Accountants.

Examined with the vouchers and found to be correct. *3rd April* 1912. { John Hudson [*F.*].
William H. Burt [*A.*].

Dr. *Balance Sheet of Trust Funds, 31st December 1911.* Cr.

	£	s.	d.
To ASHPITEL PRIZE FUND:—			
Capital—20 Shares in the Architectural Union Company, Limited, at £14 per Share	280	0	0
Balance at credit of Revenue Account	45	15	10
To ANDERSON AND WEBB FUND (Board of Architectural Education):—			
Capital—43 Shares in the Architectural Union Company, Limited, at £14 per Share	602	0	0
Balance at credit of Revenue Account	162	14	7
To ARTHUR CATES LEGACY FUND:—			
Capital—£1160 N.-E. Ry. 4 per Cent. Preference Stock: Value at 31st December 1911	1218	0	0
Balance at credit of Revenue Account	69	17	10
To HERBERT BAKER SCHOLARSHIP	250	0	0
Less paid to Mr. Gordon Leith	62	10	0
	187	10	0
To DONALDSON TESTIMONIAL FUND:—			
Capital—£72 L. & N.-W. Railway 4 per Cent. Consolidated Preference Stock: Value at 31st Dec. 1911	75	12	0
Balance at credit of Revenue Account	14	5	3
To GODWIN BURSARY FUND:—			
Capital—£1030 Caledonian Railway 4 per Cent. Debenture Stock: Value at 31st December 1911	1091	16	0
Balance at credit of Revenue Account	57	10	8
To GRISSELL LEGACY FUND:—			
Capital—£200 *s.* 8*d.* "B" Annuity Great Indian Peninsula Railway: Value at 31st December 1911	415	13	10
Balance at credit of Revenue Account	10	6	0
To LIBRARY FUND:—			
Balance at credit of Revenue Account	24	8	8
To OWEN JONES STUDENTSHIP FUND:—			
Capital—£2128 Midland Railway 2½ per Cent. Debenture Stock: Value at 31st December 1911 (£ *s.* *d.* 1447 0 9)			
£1247 Great Western Railway 5 per Cent. Consolidated Guaranteed Stock: Value at 31st December 1911 (1633 11 5)			
	3080	12	2
Balance at credit of Revenue Account	156	8	5
To PUGIN MEMORIAL FUND:—			
Capital—£1070 L. & N.-W. Railway 4 per Cent. Consolidated Preference Stock; Value at 31st Dec. 1911	1123	10	0
Balance at credit of Revenue Account	5	17	0
To SAXON SNELL BEQUEST:—			
Capital—£698 4*s.* New Zealand 3½ per Cent. Stock: Value at 31st December 1911	673	15	3
Balance at credit of Revenue Account	140	7	9
To TITE LEGACY FUND:—			
Capital—£1150 2½ per Cent. Consols: Value at 31st December 1911	885	10	0
Balance at credit of Revenue Account	30	9	9
To WIMPERIS BEQUEST:—			
Capital—£1024 18*s.* 8*d.* Metropolitan Water Board 3 per Cent. "B" Stock: Value at 31st Dec. 1911	850	13	10
Balance at credit of Revenue Account	131	4	7
	£11333	19	5

SAFFERY, SONS & SKINNER,
Chartered Accountants.

	£	s.	d.
By Government and other Securities, being total value of Trust Funds invested at this date	10297	3	1
By Cash, Ordinary Funds Bank Account	1036	16	4
	£11333	19	5

Examined with the vouchers and found to be correct. *3rd April* 1912. JOHN HUDSON [*F.*]. WILLIAM H. BURT [*A.*].

The Council submit an Estimate of Income and Expenditure of Ordinary Funds for the year ending 31st December 1912, exclusive of Entrance and Final Examination Fees:—

Rough Estimate of Income and Expenditure for Year ending 31st December 1912.

ORDINARY EXPENDITURE.	£	s.	d.
Rates, Taxes, and other expenditure hitherto paid by A.U.C.	800	0	0
Gas and Electric Lighting	140	0	0
Coal and Coke	70	0	0
Salaries and Wages	2750	0	0
General Printing, Stationery, Stamps, and Petty Expenses	1350	0	0
General Meetings and Exhibitions	350	0	0
Housekeeping	360	0	0
Advertisements	100	0	0
Examination Expenses	400	0	0
General Repairs	125	0	0
Fire Insurance	100	0	0
Medals and other Prizes	150	0	0
Grant to the Library	150	0	0
" " Architectural Association	100	0	0
" " Architects' Benevolent Society	100	0	0
" " Royal Architectural Museum	21	0	0
" " A.A. Sketch Book	25	0	0
" " British School at Rome	21	0	0
The JOURNAL	2200	0	0
The KALENDAR	420	0	0
Contributions to Allied Societies	500	0	0
Legal and Accountants' Charges	350	0	0
Presidents of Allied Societies	85	0	0
Portrait Fund	80	0	0
Telephone	25	0	0
Subscription to Comité Permanent	15	0	0
Sundries	100	0	0
Interest on Overdraft	250	0	0
Contingencies	100	0	0
Estimated Balance of Income over Expenditure	1068	0	0
	£12305	0	0

ORDINARY INCOME.	£	s.	d.
Subscriptions and Arrears	8800	0	0
Sale of Publications	680	0	0
Advertisements	1000	0	0
Use of Rooms	100	0	0
Examination Fees	1550	0	0
Galleries	175	0	0
	£12305	0	0

REPORT OF THE AUDITORS FOR 1911.

We have carefully examined and checked the books and accounts with the vouchers for the year 1911, also the certificates and scrip of securities, and find that they agree with the balance-sheet prepared by the Accountants.

It will be seen from the Revenue Account for the year 1911 that there is a deficit of £2161 7*s*. 7*d*., which to a large extent is due to the balance of the Town Planning Conference expenses, amounting to £1675. 16*s*. 9*d*., and to other items included under the head of "Extraordinary Expenditure," amounting in all to £2146. 16*s*. 0*d*.

The income for the year 1911 as shown in the Revenue Account is £11,814. 7*s*. 2*d*., and the expenditure, apart from the items termed extraordinary expenditure, is £11,828. 18*s*. 9*d*., showing a small deficit of £14. 11*s*. 7*d*.

Included, however, in the item of "Sundry Creditors," amounting to £2335. 18*s*. 8*d*., shown in the balance-sheet, is an amount of £1543. 15*s*. 0*d*. for rent due to the Architectural Union Company during the years 1910 and 1911 and remaining unpaid at 31st December, 1911. When this is paid, the Architectural Union Company will declare a dividend of a similar amount, less certain expenses for rates, taxes, &c., the whole of which will be paid to the Institute as revenue.

It is our opinion that, provided no exceptional expenditure is incurred, there should be a substantial excess of income over expenditure for the year 1912 and subsequent years.

This excess should be applied steadily to the reduction of the loan from the bank which was negotiated in the year 1911, and for the purpose of paying the expenses in connection with the alterations and additions to the premises and the Town Planning Conference.

In the account there are the following items of expenditure :—Mortar Tests £115. 3*s*. 9*d*., Concrete Report £67. 11*s*. 0*d*., Dinner (deficit) £105. 10*s*. 0*d*., and a considerable sum for legal charges. We are of opinion that as there is a large overdraft on the bank, such expenses in future should be restricted.

It is anticipated that the Galleries will be in greater demand and the income from same consequently increased.

As the Ashpitel and Anderson and Webb Trust Funds are invested in the Architectural Union shares, it will be advisable to arrive at a proper value of these shares when the company is wound up, so that the funds may be invested in an approved Trustee Security.

Under the heading of "Assets" in the balance-sheet, the property of the Institute is represented by the amount paid for the Architectural Union shares, and by the expenditure on alterations and additions to the premises. We are of opinion that when the Architectural Union Company is wound up, a proper valuation should be made of the premises and contents, such valuation to take the place of the amounts previously referred to.

The staff of the Institute is to be congratulated on the very careful and efficient way in which the account books are kept, thereby greatly simplifying investigation.

JOHN HUDSON [*F*.]
WILLIAM H. BURT [*A*.] } *Hon. Auditors.*

REPORT OF THE RECORDS COMMITTEE.

The Committee has not felt it wise to push forward the geographical survey of architectural buildings which they originally contemplated, as this work has been undertaken by the Royal Commission on Historical Monuments, the first fruits of whose labours have been shown in the publication of their volume on Hertfordshire. The Institute is represented on the Royal Commission by their President, Mr. Leonard Stokes, and it is a matter of satisfaction that the work is being done in such an admirable and complete manner. The

Committee has suggested to the Royal Commission that it would add to the usefulness of its publications if the buildings of which measured drawings are known to exist were indicated, and also if those buildings of which it is desirable, from an architectural point of view, that a survey should be made were recommended to the attention of students.

The Committee is glad to notice that the Board of Architectural Education has altered the conditions of the Essay Prize so that a student may in future submit original work of his own choosing: a change which this Committee has consistently pressed for in order that some of the students may be encouraged to survey unexplored fields in architectural record.

The Committee has been in communication with Dr. Ashby, the Director of the British School at Rome, with regard to the Guide Book to Italy which he is writing for students. Dr. Ashby has been good enough to consider favourably the suggestions of this Committee on various points of detail.

The Committee suggests that buildings of architectural interest in London whose demolition is contemplated should be scheduled from time to time in the Institute JOURNAL and recommended to students for measuring up.

The Committee is now concerned with the compilation of a list of hotels recommended by students on their return from travel; a list of buildings suitable for students to measure; the record of country building methods; the recording of smaller works of architectural interest likely to be destroyed.

W. R. LETHABY, *Chairman.*
W. CURTIS GREEN, *Honorary Secretary.*

MINUTES. XIII.

At the Seventy-eighth Annual General Meeting (being the Thirteenth General Meeting of the Session 1911–12) held Monday, 6th May 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 22 Fellows (including 5 members of the Council); 35 Associates (including 1 member of the Council), and 1 Licentiate—the Minutes of the Meeting held 22nd April, being printed in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary having announced the decease of Sir John Taylor, Fellow and Past Vice-President, it was resolved that the regrets of the Institute for the loss of its distinguished member be entered on the Minutes of the Meeting and that a message of condolence be addressed to his family sympathising with them in their bereavement.

The decease was also announced of John Barlow Badock, *Fellow*, elected 1876; Jonas James Bradshaw, *Fellow*, elected 1886; Arthur Whitcombe, *Associate*, elected 1882.

A proposal by the President that a report from the Records Committee which had just been received should be taken as read and included in the Annual Report to be published in the JOURNAL was put to the Meeting and agreed to.

The President having formally presented and moved the adoption of the Annual Report of the Council for the official year, the motion was seconded by Mr. Henry T. Hare, *Hon. Secretary.*

In the discussion which ensued* the following members took part:—Messrs. Wm. Woodward [*F.*], W. R. Davidge [*A.*], Sydney Perks, F.S.A. [*F.*], Herbert Shepherd [*A.*], Maurice B. Adams [*F.*], Albert W. Moore [*F.*], G. Leonard Elkington [*A.*], J. Douglass Mathews [*F.*], C. H. Brodie [*F.*], Hampden W. Pratt [*F.*], Alan E. Munby [*A.*], Herbert A. Satchell [*F.*], G. Ernest Nield [*F.*], Edward Greenop [*A.*], and Percy B. Tubbs [*F.*].

On the motion of Mr. W. R. Davidge the words "to amalgamate the two bodies" were inserted at the end of the 5th line of the paragraph headed "Registration" (p. 44).

Further, on the motion of Mr. Davidge, the President agreed that information should be given in the Report as to the application of the Howard Colls bequest of £500 which had been left to be applied at the President's discretion either for educational purposes or for the Architects' Benevolent Society.

In the paragraph relating to the Form of Agreement between Contractors and Sub-Contractors in the Practice Standing Committee's Report it was agreed to insert the word "new" in the second line so as to read "a *new* Form of Agreement."

In the paragraph beginning "This excess" in the Auditors' Report it was agreed to insert the word "and" in the second line, after "1911."

Finally it was

RESOLVED, that, subject to the amendments indicated, the Annual Report of the Council for the official year 1911-12 be adopted.

A list of attendances at meetings of the Council and Standing Committees during the Session was presented and laid on the table.

On the motion of the President a vote of thanks was passed to Messrs. John Hudson [*F.*] and W. H. Burt [*A.*] for their services as Hon. Auditors, and the same gentlemen were nominated to serve in that capacity for the ensuing year.

The proceedings then closed and the meeting separated at 10.20.

* A report of the discussion will appear in the next issue of the JOURNAL.

HOUSE PAINTS AND PAINTING, WITH SPECIAL REFERENCE TO NON-POISONOUS PIGMENTS.

By Arthur Seymour Jennings, F.I.B.D., Editor of *The Decorator*.

Read before the Cardiff, South Wales and Monmouthshire Architects' Society, 15th December 1911, and the Bristol Society, 5th February 1912.

NO attempt need be made to give an exact definition of paint; it is too familiar a product to render this necessary. Paint may be regarded as a mixture of a pigment—of which white lead, zinc oxide, ochre and sienna are examples—with a drying oil, such as linseed, the admixture being rendered complete by grinding the two together in a cylindrical roller mill which is so arranged that the rollers move laterally in their revolutions, thus grinding the particles of which the pigment is composed to a very fine condition, and at the same time causing an intimate admixture with the oil.

As a rule paint is supplied to the painter in the form of a stiff paste, and it is his business before applying it to add a proportion of turpentine and of linseed oil in order to thin it to a consistency suitable for being applied by a painter's bristle brush. In some cases, paint is blown on the surface by means of a pneumatic machine. Usually, but not at all times, a small proportion of driers is also added to assist the quick drying of paint. Driers are materials which possess the property of quickly absorbing oxygen, and hence cause the paints to become hard quicker than would be the case if the driers were not used. Some pigments, Vandyke brown for instance, require a good deal of driers; others, like red lead, are themselves driers.

Apart from the beauty or decorative effect of paint its chief and all important function is to preserve the material to which it is applied, whether it be wood, iron, cement, or stone, and there can be no doubt that if a paint is carefully selected, and is properly applied, it will preserve the material forming part of the building almost indefinitely, provided that it be renewed at regular intervals. The selection of the best paint for any particular purpose will depend principally upon the material and its situation. A paint which might be eminently suitable for painting a structure situated in the pure air of an agricultural district might be wholly unsuitable for use in a smoky town where sulphur abounds, or a building situated on the coast where it would be exposed to the destroying action of the sea air.

In every case, however, the architect, the engineer, and the property owner are chiefly interested in the cost of the paint and its application. It is of paramount importance to them to consider not only the first cost of paint and painting, but how often the paint must be renewed. In other words the actual durability of the paint must necessarily be their first consideration. The cost of keeping property painted has been likened to that of insurance: a tax, it is true, but a very necessary one. Some shortsighted owners of house property very foolishly neglect to repaint as often as is necessary, and not infrequently delay the work until the greater part of the paint film has disappeared, the result being that a permanent condition of decay is started, which often cannot be arrested, as for instance in the case of iron, which if rusted will continue to oxidise even after a coat of paint has been applied unless every particle of rust is first removed. Wood which has commenced to decay will also continue to do so even when a coat of paint is given to it, for it must be remembered that the paint film is by no means impervious to air, however great the efforts made to render it so.

In many cases, but by no means all, a white pigment is used as the base of the paint, and when a colour is required, it is added in the form of a ground coloured pigment. Not infrequently coloured pigments are used without admixture with white, such as in the case of siennas, ochres, and earth colours generally, bright reds, greens, etc., when they are known as "body" or "self" colours.

We have to consider the following materials which are usually necessary to form a paint, viz., (*a*) pigment, (*b*) oil, (*c*) turpentine, (*d*) driers, and (*e*) colouring matter, if any. In the limited time at my disposal it is obvious that I can only deal with these very briefly, but I may direct attention to a few points which are of interest before passing to a consideration of pigments which are of so much importance. Linseed oil is almost invariably used in mixing paints, although poppy oil, walnut oil, hempseed oil, and other drying oils are sometimes employed in this country, chiefly by artists. Thus far no reliable substitute for linseed oil has been discovered, although soya bean oil, sunflower-seed oil, and other vegetable drying oils have been proved to possess no inconsiderable value. Chinese wood or tung oil is rapidly increasing in favour amongst varnish manufacturers and others, and according to Dr. Toch, an eminent American authority, it may be employed with great advantage in combination with Medhaden fish oil, especially for use in the making of a paint for the protection of concrete.

Raw linseed oil is the most reliable for ordinary work, but boiled oil is a favourite among some painters, particularly for outside work. A mixture of two-thirds raw and one-third boiled gives a good result. A valuable product is refined boiled linseed oil, which is light in colour and may be used in preparing white paint, particularly that made from zinc oxide. The quality of the oil used largely determines the life of a paint, and a convenient manner of regarding its functions is to consider it as equivalent to Portland cement used in concrete, for as one holds together the stones and core forming the whole mass, so does the oil when it is dry hold together the minute particles of which the pigment is made up.

American turpentine has been a favourite for many years, but its continued high price has demonstrated the fact that the lighter petroleum products or "white spirits," which are cheaper, may be used in most cases with equally good results. Many years ago I used ordinary benzine in paint in lieu of turpentine, and found it quite effective excepting for flat work, where the rapid evaporation caused "flashing." It should be remembered that turpentine forms no permanent part of a paint film. It is used merely to temporarily thin the oil and pigment so as to render it of a consistency suitable for application by means of a brush. When the paint is dry and hard no turpentine remains.

Much might be said as to the driers used in paint, but I must content myself now with a few general observations. If an excess of driers is used it is without doubt disastrous to the durability of any paint, however good it may be. In the painter's parlance, "too much drier burns the life out of a paint." Many of the troubles which occur with paint and which appear to be unaccountable might be correctly attributed to the simple explanation of too much driers being added to the paint. Some journeymen painters appear to think that the greater the quantity of driers that are used the better will be the result, and that all difficulties in natural drying, such as fogs, damp, etc., may be overcome by using a greater quantity, while as a matter of fact a supply of pure air—not necessarily warm—will give the necessary oxygen without which the paint cannot dry properly at all. In a badly ventilated room, paint or varnish will often remain soft a long time. Even well-informed painters are to a great extent handicapped because there is such a very wide divergence in the actual drying qualities of the driers of different makes. Some, especially those known as "paste" or "patent" driers, have but little driers in their composition, often consisting almost wholly of a mixture of carbonate of lead, sulphate of barium, sulphate of lime, etc. In my opinion—and I am aware that many painters will not agree with me—liquid driers, of first-class quality, are the safest to use. I base this opinion chiefly on the fact that the effect of such driers upon various paints can be ascertained without much difficulty, but principally because the quantity added to a paint can so easily be measured. It is most important to observe that almost invariably those pigments which require but a relatively small proportion of oil when ground into a paste to form paint require much less driers than those which require much oil. Thus white lead requires only about 7 per cent. by weight of oil, and is well known as a good drier, while Vandyke brown, which is equally well known to be a very bad drier, requires at least 50 per cent., and often more. It will be seen, then, that in most cases the quantity of oil contained in a paint determines the amount of driers necessary, because—and this important fact should always be borne in mind when considering the subject of oil paints—it is only through the drying of the oil that the hardening of the paint film can take place.

Clearly the subject of the colours used by the house painters is far too comprehensive to speak of at length. I shall content myself, therefore, by laying down a few guiding rules :—

(1) The chemical purity of colours used for tinting purposes is not important provided they are ground very finely and are not doctored with fugitive dyes or pigments.

(2) Analysis gives very little information as to the value of a colour ; for instance, a sienna will be found to consist of silica, ferric oxide, and alumina, and this forms little or no guide as to its value as a stainer, for which purpose it is most frequently used.

(3) The tone or hue of a colour is one of the principal features which determine its value.

From this it can be seen that it is practically useless to state in a specification that a colour shall be pure. There is a way, however, of insuring with reasonable certainty that good colours shall be used, and that is to specify the use of tube colours such as those exhibited. Of course the mere fact that colours are put up in this way does not insure that they are of good quality, but almost invariably such colours are finely ground and of high grade. It may be urged that the cost of such colours is prohibitive, but when the tinting strength and the freedom from waste are considered it will be found that they are but very little dearer, and the extra cost is well made up by the beautiful tones which cannot be matched by common colours.

Those who complain of colours being so fugitive may be surprised to learn of the comparatively few which are permanent. Toch, in a book recently published, gives the following list of pigments which are not affected by light, and which may be mixed with each other or with other pigments without being affected :—

Lamp black, ivory black, graphite or plumbago or any form of carbon or carbonaceous black, zinc white or any form of oxide of zinc, permanent white or any form of artificial barium sulphate, venetian red, indian red, burnt umber, raw umber, raw sienna, burnt sienna and the various forms of mars

reds, orange brown and purple, oxide of chromium (transparent), viridian and terre verte; the vermilions made from sulphide of mercury, ultramarine blues, native or artificial; cadmium yellow, burnt umber, and all oxide of iron browns. "From a chemical standpoint," says Dr. Toch, "these are practically the only colours which may be mixed with each other that will not react, and I have purposely omitted a number of so-called permanent colours in this schedule, such as for instance the madder colours, which, I find, will decompose when mixed with ochres as well as if a faint trace of acid is left in the oil."

Having dealt with oil, turpentine, driers, and colours, I now pass to a consideration of the pigment, and will confine myself, for the sake of brevity, to white pigments which form the base of many paints. The chief of these are white lead, zinc oxide, and various other zinc compounds. White lead has for many years been used as a paint base, in fact for so many years that a great majority of painters imagine that no other white pigment is or can be so good for protective purposes. In this view they are supported by many architects and engineers who have not inquired closely into the subject. I have no intention whatever of condemning white lead, excepting for two reasons, viz., its susceptibility to sulphur compounds and its well known poisonous qualities—qualities which are only now becoming realised, although happily a correct knowledge of the subject is growing every day. Recently the following question was put to me by a close personal friend who is an architect: "How is it," said he, "that it is only of late years that we have heard so much about white-lead poisoning? I suppose all the fuss is made by some makers of a rival material." I gave my friend in substance an explanation which I will endeavour to reproduce now. It is true that it is only about twelve years ago that much attention has been paid in our own country to the poisoning of operatives who make and apply lead compounds. Abroad the agitation has been going on for a long time, and, as a result, the use of white lead will cease at the end of the present year in France. In Belgium, dry white lead is not allowed on sale but only when ground in oil. In Switzerland white lead has been experimentally discarded for four years, on Government buildings and elsewhere certain restrictions are enforced—for instance, to cite the most important, burning off old paint is not permitted, and neither is dry rubbing down. These are useful rules, because when an old painted surface consisting chiefly of white lead is either burnt off or rubbed down with glass paper, particles of lead are certain to float in the air and be inhaled by the workman. Both operations too can be carried out in a practical way without much extra trouble. Old painted work that is in such a bad condition that it must be removed prior to repainting can be rendered quite soft with a paint solvent and then be very readily scraped off, while in the case of a surface that is in a fair condition the glass paper used for smoothing can be moistened with turpentine and in that way the quantity of lead dust be minimised.

Now let us see what has happened at home. For years past the Board of Trade regulations relating to white-lead factories have year by year been made more stringent, and the undoubted poisonous nature of the pigments has been recognised and every precaution taken to prevent the workpeople being affected. Notwithstanding, cases of poisoning still continue, as the following statistics will show. Sir Thomas Oliver, in his *Diseases of Occupation*, published three years ago, states that 399 cases occurred among workers in lead factories in 1899, 358 in 1900, with a smaller number until 1906, when 108 cases were reported.

It must be remembered that cases of illness in a lead factory for many years past have had to be notified, and also that a medical officer at frequent intervals visits and inspects the workpeople. I would ask you to remember that baths are insisted upon, and food, coffee, etc., are given to the operatives as well as a dust-excluding respirator to be worn during certain stages of the work; in brief, everything possible is done to ward off the danger. And yet the cases of poisoning continue with all these precautions. Now let us see what happens to the painter who applies the lead, who is not compelled to take baths or wear a respirator, or indeed to take any other precautions. He is subject to the effects of lead which comes in contact with his skin, to the lead fumes arising in burning off paint, and, as just stated, to the fine lead dust which inevitably floats in the air and must be inhaled in the necessary operation of rubbing down old lead-painted work preparatory to the application of new paint. Can it be greatly wondered at if he contracts lead poisoning?

And now we reach an explanation for my friend the architect who inquired why one heard so much on this subject while some years ago it was not often mentioned. Until the Workmen's Compensation Act of 1904 came into force, lead poisoning among painters was not notified. Undoubtedly there were many cases before that time as there are now—probably more. A journeyman painter was stricken with the disease and died. The doctor attending him would give a certificate that he died from lead poisoning, or most probably from another disease set up by the poison. The man was buried and there the matter rested. But the Act referred to changed all that, because it made lead poisoning "an accident," in other words the Act dealt with illness or death arising from lead poisoning exactly as though a workman injured himself by a fall. As compensation is paid under the provisions of the Act, cases which previously would never have been heard of came to light, and we have now actual figures which cannot be disputed. I give them

from a Blue-book published but a few weeks since and they are as follows: During the year 1910 there were 454 cases of lead poisoning, and in 348 of these the first payment by way of compensation was made in that year. In the face of those figures, can anyone have the hardihood to say that there is no danger?

There may be some gentlemen among those here to-night who may assert that if ordinary precautions are taken by a working painter, in other words, if he is scrupulously clean, there is not any danger. I will grant that some natures are more susceptible to attacks than others, but we must take the men and their habits as we find them, and cannot disregard the official figures which have been given. If any doubt is still entertained on the subject, the action of Insurance Companies should remove it entirely. When the Workmen's Compensation Act first came into force the premium of insurance on buildings under 30 feet high was 20*s*. per cent. for builders and 20*s*. per cent. for painters. After two years' working it remained stationary in the case of builders, but was raised to 30*s*. per cent. for painters. The higher rate is fixed in order alone to cover the extra risks of lead poisoning. This statement is not made by me carelessly or lightly, but is the result of persistent inquiry of a number of the principal Insurance Companies. This one fact of raising the premium of insurance has brought the subject to the front. This, together with the many cases reported which were previously unknown, no doubt led to the appointment of two Departmental Committees who are taking evidence, and who will doubtless recommend that some drastic precautions be taken in the use of lead compounds, if even it is not prohibited altogether.

I think I have said enough to show that white lead, however carefully it may be used, is in reality gravely dangerous to health and life. It is not only so to the workmen, but to their offspring. Sir Thomas Oliver, in his book already mentioned, says: "Taking seven healthy women who were married to lead-workers, and in whom there were a total of thirty-two pregnancies, the results were: eleven miscarriages, one still birth, eight children died within the first year after birth, four in the second year, five in the third, and one subsequent to this, leaving only two children out of the thirty-two pregnancies as likely to live to manhood." The dangers to lead-workers have been abundantly proved by medical and scientific evidence, by Government statistic returns, which cannot be contested, and by the actual experience of the Insurance Companies.

Accepting evidence so strong, the question naturally arises, Is there any white pigment which is non-poisonous and which can take the place of white lead? The answer is most emphatically in the affirmative, indeed one might well ask how they will manage in France where white is so often used for the decoration of the exterior of buildings. Zinc oxide and various other zinc compounds are used there as they are in the United Kingdom. These are innocuous, and when properly mixed and applied may be used to the total exclusion of lead and without the slightest fear of any harmful result. I will take oxide of zinc first. This beautiful white pigment is made by burning spelter or metallic zinc in a furnace, resulting in its being converted into vapour which on cooling yields the zinc oxide of commerce. It is very white—much whiter than white lead for example—occurs in very minute particles, and is wholly unaffected by gases, light, air, and ammonia or sulphur fumes. It does not affect, and is of itself unaffected, when mixed with any other pigment; for example, it does not change colour, as white lead does, when mixed with ultramarine, cadmium yellow, etc. Without enlarging on its merits, and they are without doubt many, let me make a few points quite clear. Zinc oxide is not a new pigment; Mr. J. Cruickshank Smith in his work on the subject, says: "It was Countois of Dijon who in 1781 brought zinc oxide into prominence in a commercial sense, and three years later we find the material referred to in favourable terms in an English work dealing with artists' materials. The product of Countois and others about that time was irregular in quality and more or less imperfect." To this may be added that the process of manufacture made great progress, and during the past twenty years or so it has been further greatly improved.

This will clear up a grave misunderstanding which exists, viz., that zinc oxide is quite a modern product, a sort of newly invented pigment which has to be proved in actual use before its merits can be acknowledged. As a fact it has been known from very ancient times. For years past there has not been a paint manufacturer, large or small, in the United Kingdom who has not used it, often in quantities amounting to many hundreds of tons a year. Zinc oxide is the sole pigmentary base of every one of the beautiful white enamels which are so popular and so durable. Chinese white, so largely used by artists both in water and oil, is simply a high grade of pure oxide of zinc, and is so valuable as an artist's pigment because of its stability, purity of colour, and the fact to which I have just referred that it is not affected by, or will itself affect any colour whatever. Flake white, it may be mentioned in passing, which is also used by artists, is a high grade of pure white lead, and it is only used in oil, never in water. Flake white is well known to be liable to change colour, and is of course poisonous. A friend of mine, an artist, recently suffered from pains in the stomach, and on consulting his medical man it appeared that he had contracted the bad habit of putting his brush occasionally in his mouth. As he used flake white constantly his illness was easily explained. Zinc oxide forms, when mixed with benzoated lard, the well-known zinc ointment, and it is employed also

in many other forms. I have no figures to show how many factories exist at the present time; it will suffice to say that it is made in England, Germany, Belgium, Holland, France, and the United States of America. The total consumption at the present time in this country is estimated by the best authorities to exceed 20,000 tons per annum.

It is, of course, only to be expected that zinc oxide as well as other non-poisonous pigments should meet with opposition from some quarters. This arises chiefly from those who either have vested interests in the lead industry, or those who have never given it " a fair trial," to use a popular phrase. It is to the latter class that I now particularly appeal, because during the last ten years or so that I have been collecting information on this subject I have found that not more than one painter in, perhaps, fifty understands how oxide of zinc should be used. In nearly every case do they fail in the mixing, not that there is anything in the least difficult or complicated about it, but simply that it must not be mixed in the same way as white lead. The surprising fact is that the average painter knows well enough how to discriminate between the other pigments he uses, and would not dream of mixing red lead, for instance, in the same way as he would black; he would know that no driers are required in the one case but a considerable quantity are required in the other.

It is principally because of the wrong driers being used with zinc oxide that failure has resulted. As already pointed out, paste lead driers are great favourites with painters, many of whom suppose them to be essential, although, as mentioned, first-class liquid driers would answer much better. Lead paste driers in zinc oxide are fatal to producing a good result. In the first place they unnecessarily introduce poison in the lead contained, and, in the next, a large proportion of inert material of which they are composed injures the body or opacity of the zinc. The driers employed should be zinc driers free from lead and preferably in liquid form. If refined boiled oil is used in thinning it will often happen that no driers whatever will be required, this boiled oil, which is so very light in colour, being itself a drier. The quantity to be added will depend principally upon the state of the weather, but, to reiterate, zinc driers must alone be used with zinc oxide, preferably in liquid form. If there is any decorator present who doubts my assertion that the average painter does not know how to mix oxide properly, I should like to remind him of an incident which occurred recently, which serves to throw into a very strong light this lamentable want of knowledge on an important subject affecting the trade.

The National Association of Master House Painters and Decorators, numbering among its members some of the most experienced and practical men in the country, decided to make certain service tests with various white pigments. White lead, zinc oxide, sulphide of zinc, and mixtures of these were painted on boards and exposed in different parts of the country, and at the Convention held at Derby in September last the boards were produced after an exposure of some fourteen months, together with a report of an expert who had carefully examined them. Then came out the extraordinary blunder that had been made. Instead of using pale boiled refined oil and zinc driers with the zinc and the zinc compounds, ordinary lead paste driers had been used throughout. The statement was afterwards made that this was the way ninety-nine out of a hundred painters would mix the paints. I may mention that as a result of the fiasco the whole of the samples were abandoned and the association is now engaged in preparing another set of boards for exposure, and it is to be devoutly hoped that the paints will be mixed in a proper manner.

A final word on mixing zinc oxide brings me to the next point of interest in connection with it, viz., its body. Body, I need hardly remind you, is practically synonymous with opacity, which means that property a pigment when made into a paint possesses of hiding the surface to which it is applied; and it is because white lead has undoubtedly good body that its shortcomings in other directions have been overlooked. It has been alleged that zinc oxide is deficient in body, and I want to see how far this is true. If a batch of paint made with zinc oxide is mixed with a lot of paste of driers and is then thinned down with a lot of turpentine I am ready to admit that the body will be by no means satisfactory; but that is not the way to mix it. When it is considered that it needs 14 per cent. of linseed oil to grind it to a stiff paste, as against 7 per cent. for white lead, it will be seen that it is necessary to use it as " round " as possible, that is, as thick as it will go on nicely with a brush, and this does not mean unduly thick. A man with a very little experience with the pigment will know exactly how far to go in this direction.

Mr. J. Cruickshank Smith some time ago made a number of useful experiments, which have many times been duplicated since, with a view of ascertaining as far as possible the actual body of zinc oxide when formed into a white paint ready for use. He painted boards with two paints, lead and zinc side by side, and reported that in the first coat the white lead was decidedly superior; in the second coat, that is, comparing two coats of zinc oxide with two coats of lead, there was but little difference. In the third coat, however, the result was almost identical, but if there was a difference it was in favour of zinc oxide. This result is verified every day by those who use zinc oxide regularly.

One other point concerning zinc oxide should be mentioned, viz., that of cost. Some painters will say: " I acknowledge that zinc oxide is better than lead, but it costs more, and therefore I do not

use it." It is true that the price is higher than lead, but when the spreading capacity is noted it will be found that it is quite as cheap, and when the durability is also taken into consideration, cheaper. By spreading, I mean how far a given quantity will spread under a brush. The figures given by Mr. Smith are: white lead 614; zinc oxide 870. He also gives a table showing the relative cost of paints when the durability is taken into consideration, or, to put it another way, how often repainting will be required. The cost in shillings of painting and renewal per coat per hundred square yards for twenty years comes out as follows :—Oxide of zinc costs 87.82 shillings; red lead 93.06; white lead 106.13; oxide of iron 132.20.

I could cite many hundreds of opinions on this subject, given by those who have really investigated the matter on a scientific basis, but will content myself now with two. Mr. Gaston Depierres in a paper read before the Paint and Varnish Society on Zinc Oxide and its Manufacture said: "I emphatically declare that it is possible to do without white lead, and any man who doubts it is certainly twenty years behind his time." Sir Henry Tanner, Principal Architect of H.M. Office of Works, is also himself very emphatic on the subject, as is also Dr. A. P. Laurie of the Heriot-Watt College, Edinburgh, the newly appointed Professor of Chemistry at the Royal Academy.

I come now to another most important non-poisonous paint, which is becoming more used day by day as its merits are being better understood. The material is often called lithopone, and was invented by Mr. J. B. Orr over thirty years ago. The term lithopone was used later as applied principally to the Continental product. The present output is probably more than 20,000 tons per annum. Orr's zinc sulphide or lithopone, if properly manufactured, consists approximately of 30 per cent. zinc sulphide and 70 per cent. sulphate of barium (which must not be confused with natural barytes), the result of a double decomposition of the two salts, and is not in any way a mechanical mixture. Lithopone is sold under that name to paint-manufacturers but not to painters. It is largely employed in the manufacture of the best water paints, and is used by itself ground in oil for interior decoration. Water paints as now understood only became possible when the sulphide of zinc was introduced, white lead and zinc oxide being both unsuitable for this purpose. When used outside and exposed to the full glare of the sun it has a tendency to change colour, but this tendency is almost wholly removed in certain brands. The material is not adapted for exterior painting unless specially made for its use.

I may here pause for a moment to remark that there is some confusion of thought among some architects, engineers and decorators as to the difference between zinc oxide and lithopone because of the unfortunate use of the term "zinc white" applied to both. Having specified zinc white, an architect is perhaps supplied with lithopone, which when used outside proves a failure, and he afterwards uses this failure as a reason for condemning all zinc paints. I had occasion some little time since to go into this very question with an eminent engineer, and he said that he had used zinc oxide outside and had very bad results because it changed colour. This at once led me to believe that zinc sulphide or lithopone had been employed, and this proved to be the case on close investigation. On the other hand it must be understood that the lithopone is a splendid material for inside work. It is non-poisonous, it possesses remarkable body or opacity, and it has splendid spreading properties, averaging 5,000 square feet per cwt. on ordinary primed wood. If desired it may be painted over with a last coat of pure zinc oxide, and it is very important to observe that when white lead is used under zinc oxide or white enamel it is likely to work its way through the last coat and to change colour.

Lately many manufacturers have brought out paints for under-coating—not priming—which with one coat practically hide the surface to which they are applied. A number of boards painted with this material are before you. These are almost invariably made from pure lithopone mixed with the usual proportions of linseed oil or turps. I have many times been asked whether it is possible to use these materials and get a good job, and have answered without hesitation in the affirmative. Because a painter has been using three or four coats of lead and oil paint all his life, there is no reason why he should always adhere to that method. The surprising thing is that there has not been before this a greater difference in the pigments used in the different coats of paint. Certainly the priming coat is different from those which follow in ordinary painting, but excepting the slight variation in the quantity of oil used, the coats being alternately slightly sharp and slightly oily, the same pigment is used throughout. To my mind it seems unreasonable that the paint on the surface which is exposed to the action of the weather should be the same as that underneath which is not so exposed, and which is only intended to thoroughly cover and protect the surface to which it is applied. If a sulphide zinc is used for an undercoat, we get the maximum of body, and if zinc oxide be used for a final coat we get maximum of durability under most conditions, and above all we get that great desideratum in all matters relating to building, "real economy."

9 CONDUIT STREET, LONDON, W., 11*th May* 1912.

COMPETITIONS.

Padiham Municipal Offices Competition.

Members and Licentiates of the Royal Institute of British Architects must not take part in the above competition, the conditions not being in accordance with the published regulations of the Royal Institute for architectural competitions.

By order of the Council,

IAN MACALISTER,
Secretary R.I.B.A.

8*th May* 1912.

CHRONICLE.

The Annual Elections: New Nominations.

The following nominations have been made by members in accordance with By-law 33 :—

As Vice-Presidents.

CROSS : ALFRED WILLIAM STEPHENS [*F.*].
Nominated by Arthur W. Brewill [*F.*], B. E. Baily [*F.*], Albert W. Moore [*F.*], George Hubbard [*F.*], Arthur Marshall [*A.*], Herbert Shepherd [*A.*], William H. Burt [*A.*].

HUBBARD : GEORGE, F.S.A. [*F.*].
Nominated by S. Perkins Pick [*F.*], Stockdale Harrison [*F.*], Albert E. Sawday [*F.*], J. Stockdale Harrison [*A.*], Wm. M. Cowdell [*F.*], Arthur H. Hind [*A.*], J. Cecil Baines [*A.*].

As Members of Council.

ADAMS : MAURICE BINGHAM [*F.*].
Nominated by John Belcher, R.A. [*F.*], *Past President R.I.B.A.*; Henry C. Charlewood [*F.*], President of the Northern Architectural Association; Arthur Clyne [*F.*], President of the Aberdeen Society of Architects; James B. Dunn [*F.*], President of the Edinburgh Architectural Association; Robert Evans [*F.*], President of the Nottingham Architectural Society; James S. Gibson [*F.*], *Vice-President R.I.B.A.*; Geo. E. Halliday [*F.*], President of the Cardiff, S. Wales and Monmouthshire Architectural Society; Sydney D. Kitson, M.A. [*F.*], President of the Leeds and Yorkshire Architectural Society; Albert E. Murray, A.R.H.A. [*F.*], President of the Royal Institute of Architects of Ireland; Sir Wm. B. Richmond, K.C.B., R.A., M.A., F.S.A. [*Hon. Associate R.I.B.A.*]; W. E. Riley, R.W.S. [*F.*]; Arnold Thornely [*F.*], President Liverpool Architectural Society; John B. Wilson [*F.*], President of the Glasgow Institute of Architects.

BREWILL : ARTHUR WILLIAM [*F.*].
Nominated by George Hubbard [*F.*], A. Ernest Heazell [*F.*], Herbert Walker [*F.*], Basil E. Baily [*F.*], Albert W. Moore [*F.*], Arthur Marshall [*A.*], H. G. Watkins [*A.*].

DOWNING : H. P. BURKE [*F.*].
Nominated by Wm. Flockhart [*F.*], Sir Aston Webb [*F.*], E. Guy Dawber [*F.*], Walter Tapper [*A.*], Robert Atkinson [*A.*], John Slater [*F.*], John W. Simpson [*F.*].

EVANS : ROBERT [*F.*].
Nominated by Ernest R. Sutton [*F.*], Albert N. Bromley [*F.*], A. Ernest Heazell [*F.*], Arthur W. Brewill [*F.*], B. E. Baily [*F.*], Harry G. Watkins [*A.*], William R. Gleave [*A.*].

FARROW : FREDERIC RICHARD [*F.*].
Nominated by Albert W. Moore [*F.*], C. Stanley Peach [*F.*], W. Henry White [*F.*], C. H. B. Quennell [*F.*], A. R. Jemmett [*F.*], Arnold S. Tayler [*A.*], Percy B. Tubbs [*F.*].

FLETCHER : BANISTER FLIGHT [*F.*].
Nominated by Rowland Plumbe [*F.*], And. N. Prentice [*F.*], Sir A. Brumwell Thomas [*F.*], J. Douglass Mathews [*F.*], Howard Chatfeild Clarke [*F.*], Frederic R. Farrow [*F.*], H. Phillips Fletcher [*F.*].

MITCHELL-WITHERS : JOHN BRIGHTMORE [*F.*].
Nominated by Edward M. Gibbs [*F.*], W. J. Hale [*F.*], Chas. B. Flockton [*F.*], H. J. Potter [*A.*], H. L. Paterson [*A.*], James R. Wigfull [*A.*], A. F. Watson [*F.*].

PERKS : SYDNEY, F.S.A. [*F.*].
Nominated by Wm. Woodward [*F.*], Max Clarke [*F.*], R. J. Angel [*A.*], Herbert Shepherd [*A.*], William H. Burt [*A.*], C. Stanley Peach [*F.*], H. D. Searles-Wood [*F.*].

PICK : SAMUEL PERKINS [*F.*].
Nominated by Stockdale Harrison [*F.*], Walter A. Catlow [*F.*], William M. Cowdell [*F.*], Albert E. Sawday [*F.*], Shirley Harrison [*A.*], E. R. O. Davis [*A.*], Walter Brand [*A.*], T. Trevor Sawday [*A.*].

QUENNELL : CHARLES HENRY BOURNE [*F.*].
Nominated by A. R. Jemmett [*F.*], Frederic R. Farrow [*F.*], W. Henry White [*F.*], C. Stanley Peach [*F.*], Albert W. Moore [*F.*], R. Stephen Ayling [*F.*], A. Heron Ryan-Tenison [*F.*].

RICKARDS : EDWIN ALFRED [*F.*].
Nominated by Harry Redfern [*F.*], H. V. Lanchester [*F.*], Edwin T. Hall [*F.*], W. H. Ward [*A.*], David Barclay Niven [*F.*], Herbert Wigglesworth [*F.*], F. Dare Clapham [*F.*].

WHITE : WILLIAM HENRY [*F.*].
Nominated by T. P. Figgis [*F.*], Percy B. Tubbs [*F.*], Arnold S. Tayler [*A.*], C. H. B. Quennell [*F.*], C. Stanley Peach [*F.*], J. Douglass Mathews [*F.*], H. D. Searles-Wood [*F.*].

WIGGLESWORTH : HERBERT [*F.*].
Nominated by A. Marshall Mackenzie [*F.*], R. A. Briggs [*F.*], And. N. Prentice [*F.*], Matt. Garbutt [*F.*], T. Edwin Cooper [*F.*],W. G. Wilson [*F.*], Stanley Hamp [*A.*].

As Associate-Members of Council.

ELKINGTON : GEORGE LEONARD [*A.*].
Nominated by Alfred W. S. Cross [*F.*], Sydney Perks [*F.*], J. Douglass Mathews [*F.*], Horace Cubitt [*A.*], Fred. R. Hiorns [*A.*], William R. Davidge [*A.*], Herbert A. Satchell [*F.*].

GAMMELL : KENSINGTON [*A.*].
Nominated by C. Stanley Peach [*F.*], A. Needham Wilson [*A.*], Albert W. Moore [*F.*], Herbert Shepherd [*A.*], Sydney Perks [*F.*], George Hubbard [*F.*], Alfred W. S. Cross [*F.*], William H. Burt [*A.*].

GUNN : EDWIN [*A.*].
Nominated by Edward Greenop [*F.*], C. Stanley Peach [*F.*], Albert W. Moore [*F.*], T. P. Figgis [*F.*], A. R. Jemmett [*F.*], Herbert Shepherd [*A.*], Alan E. Munby [*A.*].

HIORNS : FREDERICK ROBERT [*A.*].
Nominated by Ernest Newton [*F.*], Sydney Perks [*F.*], Leonard Stokes [*F.*], R. J. Angel [*A.*], Arthur W. Shepherd [*A.*], Percival M. Fraser [*A.*], Alfred W. S. Cross [*F.*].

MUNBY : ALAN EDWARD [*A.*].
Nominated by A. Needham Wilson [*A.*], T. Phillips Figgis [*F.*], Matt. Garbutt [*F.*], H. D. Searles-Wood [*F.*], Herbert G. Ibberson [*F.*], Wm. H. Atkin-Berry [*F.*], Herbert A. Satchell [*F.*].

SOLOMON : DIGBY LEWIS [*A.*].
Nominated by Sydney Perks [*F.*], W. Henry White [*F.*] H. D. Searles Wood [*F.*], Arthur Ashbridge [*F.*], A. H. Kersey [*F.*], Ernest Newton [*F.*], Matt. Garbutt [*F.*].

As Members of the Practice Standing Committee.

NIELD : GEORGE ERNEST [*F.*].
Nominated by John W. Simpson [*F.*], W. A. Forsyth [*F.*], Maurice B. Adams [*F.*], Wm. Woodward [*F.*], Gerald C. Horsley [*F.*], Herbert A. Hall [*A.*], W. Curtis Green [*F.*].

SNELL : ALFRED SAXON [*F.*].
Nominated by H. D. Searles-Wood [*F.*], Edwin T. Hall [*F.*], J. E. Mundell [*A.*], Sydney Perks [*F.*], Herbert A. Satchell [*F.*], J. Osborne Smith [*F.*], W. Kaye-Parry [*F.*].

The Australian Commonwealth Capital.

The following letter from the Secretary of the Institute appeared in *The Times* of the 22nd April :—

SIR,—The attention of the Council of the Royal Institute of British Architects has been called to a telegram in your issue of 16th April in which your Sydney Correspondent states that the designs for the Federal Capital have been reduced to a dozen, most of them the work of Americans, Frenchmen, or Germans, and the British designs have only a small chance. In the absence of fuller information this statement would naturally lead your readers to think that British architects have been unsuccessful in competition with foreigners in the planning of the new Australian city. The facts are these. When the conditions of the competition were published by the Minister of Public Works the Australian Institutes of Architects at once protested against their unfair and unsatisfactory nature. There was no proper provision made for the appointment of qualified assessors, and the Australian Institutes warned the Minister that unless the conditions were amended their members would refuse to take part in the competition. The Minister refused to adopt the suggestions of the representative architectural bodies, and they accordingly vetoed the competition. They then appealed for support to the Royal Institute of British Architects, of which they are affiliated societies. The Royal Institute, which entirely agreed with the attitude of the Australian Institutes, endeavoured, both by correspondence with the Minister and by deputation to the Acting High Commissioner in London, to induce the Australian Government to put the competition on a fair and proper basis. The Minister again refused to alter the conditions in any way, and the Royal Institute supported the action of its affiliated societies in Australia by issuing a veto to its members against the competition and by informing the American Institute of Architects and the principal architectural bodies on the Continent of the action which it had taken in the matter.

There is reason to believe that the great majority of the architects of the Empire have loyally supported the decision of their representative bodies and have not entered for this competition.

Yours faithfully,
IAN MACALISTER,
Secretary R.I.B.A.

The Records Committee R.I.B.A. : Records of Old Buildings.

The Records Committee are compiling a list of interesting houses and other buildings in London, particularly such as are likely to be pulled down. The Hon. Secretary of the Committee will be glad to hear of any threatened buildings of which records ought to be obtained before they are destroyed. Students who wish for subjects to measure may communicate with Mr. Rudolf Dircks, the Librarian. The Committee further desire to assist in the record of smaller works of architectural interest in any part of the country. Information regarding those likely to be destroyed will be gratefully received.—W. CURTIS GREEN, *Hon. Sec.*

Architectural Assistants.

Mr. Snowden, in the House of Commons last week, asked the Hon. Member for St. George's-in-the-East, as representing the First Commissioner of Works, if any decision had been arrived at in regard to placing the class known as "Architectural Assistants" engaged in the Office of Works upon the established list ; whether the undertaking given on the 7th December last, that the wishes of all the men in this class in regard to their desire to be established would be ascertained, had been carried out, and, if any scheme had been prepared, would he say what was the nature of the proposals made ? —Mr. Wedgwood Benn replied that a scheme had been submitted to the Lords Commissioners of his Majesty's Treasury, which provides for the establishment of a staff of permanent architectural draughtsmen and technical assistants to the architects.

Parliament Buildings, Winnipeg.

The competition promoted by the Government of Manitoba has been narrowed to five architects, the assessor in the preliminary competition being Mr. Leonard Stokes, P.R.I.B.A. Each of the five competitors will receive a sum of two thousand dollars to complete his designs. British subjects practising in the British Empire were alone eligible to compete. The cost of the building was estimated at £400,000. Mr. Leonard Stokes has named the following five architects to proceed further:—Mr. F. W. Simon [*F.*] (Liverpool); Messrs. E. & W. S. Maxwell (Montreal); Messrs. Sharp & Murray (Toronto); Messrs. Brown & Vallance (Montreal); Messrs. Clemesha & Portnall (Regina, Sask.). In handing his report to the Minister of Public Works Mr. Stokes testified to the general excellence of the designs sent in.

Manchester University: Professor Capper's Resignation.

Professor S. H. Capper, F.S.A. [*A.*], now happily recovering from a serious riding accident followed by pneumonia, has been ordered to take a long rest, and under medical advice has resigned the Chair of Architecture at Manchester University. The University Council have passed the following resolution:—"That the Council of the University, in accepting Professor Capper's resignation, desire to express their great regret, and to place on record their sense of his services to the University as first Professor of the subject in developing the Department of Architecture, and also of his invaluable work in relation to the Officers' Training Corps as its Commanding Officer. They would convey to Professor Capper their cordial wishes for the complete restoration of his health."

Newly elected Licentiates.

At the Council Meeting of the 22nd April the following candidates were elected Licentiates R.I.B.A. in accordance with the provisions of By-law 12:—

ADAM : Matthew (Glasgow).
ALSOP : Rodney Howard (Melbourne).
ANDREW : Arthur Godwyn (Cheadle Hulme).
ATKINSON : Beaumont Ellis, Jun.
BOX : Lawrence Ashton (Bombay, India).
BRADSHAW : Arthur George (Lancaster).
BRAMELD : Thomas (Singapore).
BRERETON : Thomas Bloomfield Sadlier.
BRIERLEY : Reginald Butler (Bedford).
BRODRICK : Cuthbert John (New Zealand).
BROWNE : F. Anstead (Ipswich).
CAMPBELL : Charles Ogilvie (Chester).
CARELESS : William Edward (Montreal).
CHAIKIN : Benjamin.
COLLETT : Ernest Austin (Sledmere).
COLLINS : George (Oldham).
CUMMINS : Wilfrid Joseph (Manchester).
EAGLE : John (Manchester).
GLADWELL : James Morris Heber.
GORMAN : James (Malay Peninsula).
HALL : Douglas (Huddersfield).
HARVEY : John Henry (Melbourne).
HENDERSON : Arthur Edward.
HIGGINBOTTOM : Gilbert (Manchester).
JENNINGS : James (Ambleside).
JONES : Gerald Edgar (Auckland, N.Z.).
JOYNSON : Charles William Davies (Wednesbury).
KISLINGBURY : Arthur Vernon.
McILWRAITH : John Forsyth (Cambridge).
McNAIR : Charles James (Glasgow).
MAGOON : Herbert Alton (Edmonton, Alberta).
MILES : Frank M.
MILES : Stanley Charles (Bournemouth).
MORGAN : Cecil Herbert (Madras).
MYERS : John.
OSBOURN : Edward (Pietermaritzburg).
PIERCY : Arthur Raymond Pratt (Stoke-on-Trent).
POLLOCK : Douglas Warren.
QUARTERMAN : Arthur Richard.
ROBERTS : J. F. G. (Wellington, N.Z.).
ROBERTSON : Alan Keith (Edinburgh).
ROBERTSON : Alexander (Kalgoorlie).
SANDS : Hubert C.
SAXTY : Herbert Reginald.
SLADDIN : Frederick Robert Edwin (Cape Town).
SMITH : J. Roxburgh (Montreal).
STALLWOOD : Herbert Athill (Straits Settlements).
STOCKWELL : Edward (Basingstoke).
TANNER : Leslie (Brighton).
TAYLOR : Francis Robert.
THOMSON : Alexander Caldwell (Ayr).
THORPE : John Egerton (Oxford).
TODD : Alexander Cameron (Montreal).
WAITE : Richard Arthur (Bradford).
WALKER : Israel.
WALLER : Noel Huxley (Gloucester).
WALTON : Robert Elliott.
WARD : Frank (Edmonton, Alberta).
WILLIAMSON : Leslie Elliot.
WINDER : Francis Arnold (Sheffield).
ARBUCKLE : William Armour (Glasgow).
PENMAN : Larmont Douglas (Ayrshire).
ROBERTSON : Francis George Glyn (Glasgow).
WRIGHT : William John (Glasgow).

Obituary.

Sir John Taylor, K.C.B., late of the Office of Works, who died on the 1st May at his residence at Surbiton Hill, was elected Fellow of the Institute in 1881. He served as a Member of Council in the Session 1899–1900, as Vice-President in 1905–06, and had been a member of the Art Standing Committee. Sir John was born in 1833, the son of Mr. William Taylor, of Warkworth, Northumberland. He entered the Office of Works in 1859, and from 1866 to 1898 held the office of Surveyor of Royal Palaces, Public Buildings, etc., and was afterwards Consulting Surveyor. He was created K.C.B. in 1897. Sir John Taylor was responsible for many important Government buildings erected in recent years in London. The chief of these is the new War Office in Whitehall, where he carried out, in conjunction with Mr. Clyde Young, the designs of the late Mr. William Young. He was also responsible for large additions to Marlborough House, for the Record Office in Chancery Lane, the Bankruptcy Courts and offices in Carey Street, the principal staircase and central exhibition rooms at the National Gallery, Bow Street Police Court and Station, and the Marylebone, North London, and South-Western Police Courts.

Jonas James Bradshaw, J.P. [*Fellow*, elected 1886], of the firm of Bradshaw and Gass, Bolton, died on the 28th April at his residence, Greenmount, Heaton, in his seventy-sixth year. Mr. Bradshaw served his pupilage with the late Mr. Joseph Marsden, and on completing his articles remained with him for seven years as leading draughtsman and managing clerk. He began practice in Silverwells, Bolton, in 1866, and in 1884 was placed on the list of Surveyors to the Board of Trade. His earliest works of importance included the Union Workhouse, Chorley (in conjunction with Mr. Leigh Hall, who died before the contract was let, 1869–72); Clitheroe Union Workhouse (1870); Todmorden Workhouse (1875–79); Eden Orphanage, Bolton (1875–78); All Souls' Church Schools, Bolton (1877–78); Wesleyan Chapel, Westleigh (1878); Junior Reform Club, Bolton (1879); Conservative Club, Leigh (1880); Saviour's Church Schools, Bolton (1881). Later practice consisted chiefly of cotton works, mercantile buildings, and villa residences. For the past twenty-five years his nephew, Mr. John B. Gass [*F.*], had been associated in partnership with him, and of recent years Mr. Bradshaw had acted chiefly as consultant in the firm. The *Builder* of the 3rd May publishes a long list of important works (several won in competition) carried out by Messrs. Bradshaw & Gass, latterly Bradshaw, Gass, & Hope, of Bolton and London. Appointed Justice of the Peace for the borough in 1906, Mr. Bradshaw fulfilled the duties of the office with the utmost conscientiousness and was very highly esteemed by his brother magistrates.

Robert John Macbeth [*Fellow*, elected 1906], of Inverness, whose death was recently announced, served his pupilage from 1872 to 1877 with Dr. A. Marshall Mackenzie, A.R.S.A., of Aberdeen, and on the completion of his articles remained with him three years as assistant. In 1880 he entered the office of Dr. Alexander Ross, of Inverness, as principal assistant, and in 1887 became associated in partnership with him. Mr. Macbeth was the architect of—in Inverness—the Science and Art Schools, police-station and chambers, and the new halls for the United Free High Church, Bank Street; the United Free Churches, with their manses in Brora, Kirkhill, and Dornoch; restoration of the United Free Church, with hall, etc., Forres; schools at Culburnie and Portree; the public schools at Glenconnith and Tomnacross; the church buildings, Rosehall, Sutherlandshire; and residences and other buildings in Strathcarron, Forres, Portree, etc. Messrs. Ross & Macbeth prepared the plans and designs for the Seaforth Sanatorium at Dingwall, built and endowed by Colonel and Mrs. Stewart-Mackenzie of Seaforth (1907); St. Kessog's Church, Auchterarder, planned for all forms of Christian worship; and the new church, for 900 sittings, at Auchterarder (1906–7); Free Church, Struy; extensive additions to Skibo Castle, for Mr. Andrew Carnegie, at a cost of some £25,000, in 1899–1901; additions to the Orphanage, Aberlour, and Cluny Hill Hydro, Forres (1905–7); Caledonian Bank, Buckie; church for Mr. Dyson Perrins, at Ardross Castle, for 400 sittings; Aviemore Hotel, Inverness-shire, at a cost of £18,000; Woodward memorial reredos, St. Mary's Church, Montrose; Cumming Street Church, Forres (1899–1901); and—in Inverness—the Lord Tweedmouth memorial chapel, and the nurses' home, Northern Infirmary; the Free Presbyterian Church, for 700 sittings; the new music-hall (1899); and the enlargement and improvement of the Northern Counties District Asylum, at a total outlay of about £31,000; of the Station Hotel, and of the old Free East Church (1897–8). Mr. Macbeth was nominated in February last, with five other architects, to compete for the Scots National Memorial to King Edward VII., to be erected at Holyrood Palace, and it is understood that he submitted two sets of plans.

REVIEWS.

THE ART OF PLANNING.

The Principles of Planning: an Analytical Treatise for the use of Architects and others. By Percy L. Marks. 3rd edition. 8o. Lond. 1911. *12s. net.* [*B. T. Batsford, 94 High Holborn.*]

In the whole circle of architectural practice there exists no factor of greater importance than the art of scientific planning. Equally a science as it is an art, its development during the ages truthfully reveals, to those who search, the history and conditions of life from the dawn of civilisation to the present day. Buildings are so often praised for their external appearance that scarcely a thought is allowed to the merits or demerits of the internal arrangements, few realising that the noblest form of architecture embodies the blending of plan with elevation. This is a principle which a French architect never disregards. Trained, as a Frenchman is, to hold dear the grandeur of a plan, he begins even the simplest problem with some definite idea of the ultimate aspect of the finished structure. The result is a studied harmony between every division of his design; practical difficulties are solved logically without loss of effect because they are used as a means to an end. Although, primarily, planning must be regarded from a strictly practical standpoint, it should be borne in mind that studied plan design will be productive of convincing exteriors. How true this assertion is will be seen by reference to the plan of the mediæval churches, or to the great country houses of the Tudor period, all of which are remarkable for the harmonic relation existing between the plan and elevation. Again in later days the plans evolved by Sir Christopher Wren are masterpieces of design; it is a pleasure to study their beauty, yet from these

seemingly simple patterns the finest buildings have been erected. The plan for St. George's Hall at Liverpool and Sir Charles Barry's conception for the splendid pile at Westminster demonstrate the value of an architectural plan. Of recent years public competitions have caused an increased interest to be taken in the principles of planning, not only in connection with individual buildings but in the grouping and design of towns. To-day projected schemes are criticised as much from the æsthetical standpoint as from that of practicability, and great strides are being made in the direction of improvement. It is somewhat remarkable that, while numerous books have been published dealing with the elevational aspect of modern architecture, few are extant treating of the more important element of planning. Mr. Percy L. Marks is to be congratulated, as a pioneer, in courageously undertaking to extend some information concerning the planning of modern structures, which at present is not widely known. He treats of his subject mainly from the practical standpoint, and supports his argument by illustrating a varied series of modern English buildings. It is perhaps a matter of regret that the choice of subjects was not extended to include some additional plans of the fine buildings erected in America. The author evidently has some admiration for the simplicity of American planning, for he illustrates the Library of Congress at Washington in a series of three plates. The text of the book is admirably grouped into divisions which deal with essential features, accommodation, acoustics, &c., and although exception must be taken to some of the subjects illustrated, on the whole a high standard is maintained. Nowadays many architects specialise in some particular branch of architecture, seldom dealing with more than one class of building, and when called upon to meet any requirements outside their own experience they are frequently at a loss for preliminary details. In this regard the present edition of the book will supply a long-felt want, as it contains correct and copious information on matters of supreme importance to architects. But too much stress cannot be laid upon the fact that the planning of buildings is a subject which receives far greater consideration on the Continent and in America than it does in the United Kingdom.

A. E. Richardson, *Licentiate.*

CEMENT.

Lectures on Cement. By Bertram Blount, F.I.C. 64 *pages.* [*Institute of Chemistry,* 30 *Bloomsbury Square, W.C.*]

This pamphlet contains the substance of two lectures delivered before the Institute of Chemistry in 1911, and though somewhat technical in character for the lay reader forms a valuable little résumé upon a material of which, as the writer states, the annual output is some twenty-five million tons. It is to be feared that an architect's interest in the quality of cement is too often left to be unpleasantly aroused by its occasional animation after use, producing bulged walls, upheaved floors, and strange maladies such as a rash of green spots showing an interesting eruptive tendency on flats. If therefore only with a view to grappling with these spectres some of the facts presented in these pages should claim the attention of the profession.

Pages 5 to 18 give an historical account of the early use of hydraulic mortars which led up to the cement industry, and the remainder of this first lecture (to page 25) deals with the valuation of raw materials for Portland cement manufacture from a chemical and mechanical standpoint. The second lecture discusses the various tests which are applied to the finished product, and concludes with a résumé of the views upon its chemical composition and the changes which take place in setting. This is followed by appendices (pages 50 to 62) giving in detail the analytical methods used in testing cement and dealing with the more important clauses in the British standard specification, and the pamphlet concludes with several illustrations showing the apparatus used for the testing of cement and the plant required for its manufacture arranged diagrammatically.

Written as the brochure is chiefly for the would-be Works Chemist, it cannot be criticised from the point of view of readers of this Journal, but though architects cannot be expected to appreciate the full import of these pages there is much which is intelligible to the layman, and to those possessing a knowledge of elementary science the whole will prove interesting.

Alan E. Munby [*A.*].

Books Received.

An Architectural Account of the Churches of Shropshire. By the Rev. D. H. S. Cranage, M.A., F.S.A., King's College, Cambridge. Illustrated with Permanent Plates, reproduced from Photographs by Martin J. Harding. With Ground Plans of the most important Churches, drawn by W. Arthur Webb, A.R.I.B.A., Architectural Association, Silver Medallist. In 2 vols. Vol. II. 4o. Wellington, 1912. Hobson & Co., Wellington, Shropshire.

Procès-Verbaux de l'Académie Royale d'Architecture, 1671–1793. Publiés pour la Société de l'Histoire de l'Art Français, par M. Henry Lemonnier. Tome I.: 1671–1681. 8o. Paris. 1911. Jean Schemit, 52 Rue Lafitte, Paris.

Building Timbers and Architects' Specifications. By J. Davies. With part of Haworth's Practical Timber Measurer. 8o. Lond. 1910. 4*s.* 6*d.* net. Alfred Haworth & Co., Ltd., 84 Leadenhall Street.

"The Studio" Year Book of Decorative Art: a Review of the Latest Developments in the Artistic Construction, Decoration, and Furnishing of the House. Offices of "The Studio," 44 Leicester Square.

Ideal Designs for Houses, to be erected at St. George's Hill, Weybridge, by Mr. W. G. Tarrant. Edited by Messrs. Seth-Smith and Monro, architects. 4o. Lond. 1912. [William J. Baker, 57 Carey Street, Lincoln's Inn.]

Transactions of the St. Paul's Ecclesiological Society, Vol. VII., Part I. Augustinian Abbey of Lesnes [Alfred W. Clapham]; St. Mary Magdalene Chapel, Kingston-upon-Thames [Thomas Garratt]; St. Benet, Paul's Wharf [Philip Norman]; Christ Church, Newgate Street [Philip Norman]. 4o. Lond. 1911. 5*s.* [Harrison & Sons, 45 Pall Mall.]

CORRESPONDENCE.

Pierre Puget.

1 *New Court, Temple: 2nd May* 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In his very interesting paper printed in the JOURNAL for 27th April, p. 435, Mr. Townsend says: "This universal genius" (Pierre Puget) "during his stay in England, designed Walpole House in Bloomsbury on the site on which the British Museum now stands." The house on the site of which the British Museum now stands was not Walpole House but "Montagu House," which was rebuilt after a fire in 1678 by Louis XIV. for the French Ambassador, the Duc de Montagu, on condition that the artists employed were Frenchmen. The architect was a certain Pouget or Poughet. There is no foundation at all for the statement that Puget, the sculptor, designed this house, except a guess of Mariette's that Pouget and Puget might possibly be the same. But in 1678 Puget was hard at work on his Milo and the relief of Alexander and Diogenes, and there is no authority for supposing that he was ever in England at all.—Yours faithfully, REGINALD BLOMFIELD [*F.*].

The Institute Library.

Mr. S. W. Kershaw, F.S.A., Librarian of Lambeth Palace, who held the appointment of Librarian R.I.B.A. for eleven years (1868–80), writes:—"I had much pleasure in reading Mr. Townsend's Paper on the Institute Library, and am glad to hear that it is to be published separately in order that it may be available to students, to whom it should be most useful. I should like to suggest that a 'foreword' or introduction be included, and that reference be made therein to the late Wyatt Papworth, who took the greatest interest in the Library and did a large amount of work there. Mention should also be made of any large donation—as, for instance, that of Sir W. Tite in 1869. A record of donors' names is often very helpful in bringing about future gifts. I might mention that the Second Supplementary Catalogue of Books was made by me in 1877; also the Catalogue of Prints and Drawings. During the discussion of Mr. Townsend's Paper a question was raised as to how the Institute became possessed of the drawings (many of them tracings) of the East Anglian Rood Screens. As far as I remember, the late Mr. J. P. Seddon brought them to the Institute, and he was instrumental in their being either bought or presented about 1871–72. If there are any other points I could throw light upon I should be pleased to do so."

The Institute and Registration.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Messrs. Cross and Hubbard's letter in the JOURNAL of the 27th ult. is, to my mind, deplorable. The very fact that the Royal Institute of British Architects' Council went to such lengths as to negotiate a fusion with the Society of Architects, a body whose main justification for existence is its original and persistent advocacy of Registration, proves the reverse of "apathy or indifference" on the Council's part with respect to this great question. It is true that these efforts were futile, but this was owing to the inherent difficulties of amalgamation and to the very faulty principles adopted in the drafting of the headings of the Bill incorporated in the scheme laid before the General Meeting on 8th January last. Both these gentlemen have been on the Royal Institute of British Architects' Council and its Registration Committee, and presumably assisted in drafting and acquiesced in this scheme, which, in spite of a consensus of opinion in favour of the principles of Registration, was rejected by the Meeting.

Messrs. Cross and Hubbard now repudiate the policy adopted by the Royal Institute of British Architects during the past five years. That policy was dictated first of all by the Registration Commission or "Jury," which, after taking exhaustive and impartial evidence for and against Registration, reported, if my memory serves me:—

(1) That the members of the Royal Institute of British Architects must bear a better numerical proportion to the whole profession before it could effectively appeal to Parliament for statutory protection; and (2) that unless its examinations were controlled by its own Council and not by a General Registration Council representing other important examining bodies—such as the Universities—its principal prerogative as an Art society would be likely to be impaired. I believe Messrs. Cross and Hubbard heartily approved the report and recommendations of this Commission upon which all the Institute's subsequent policy has been founded. They now announce that they repudiate that policy, which has, at any rate, been effective in approximately doubling its membership!

Reforms so great and complicated as Registration can only be realised by tackling the acknowledged difficulties at close quarters. The Institution of Civil Engineers and the Surveyors' Institution must be approached and their concurrence gained by clauses in the draft Bill safeguarding their interests.

I am convinced that the adoption of a tentative and experimental procedure on the part of the Royal Institute of British Architects has been a wise one, and I deplore the fact that those who have shared in its counsels and are jointly responsible for its work should now charge it with apathy, incompetence, and self-seeking. Such an attack does not contribute to the end we have in view, nor to the dignity of our Institute.

W. H. SETH-SMITH [*F.*].

The Decadence of English Architecture.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—When the work of designing such important buildings as the Ritz Hotel, the *Morning Post* Offices, and the Automobile Club is entrusted to foreign architects, it is evident that there is something radically wrong with the architectural profession in England. In the cases we have quoted it can scarcely be urged that the buildings are of such a special nature as to require the services of foreign architects in preference to those which one might reasonably expect could be equally well rendered by our fellow-countrymen.

Why then have the owners of these buildings thought it advisable to go so far afield for the professional assistance they required ? We are afraid the answer must be that the owners have had sufficient discrimination to see that they are likely to obtain a better result by the employment of the foreigner. In other words, it is impossible to obtain the services of English architects who have been equally well trained in the technique of their art. The dearth of highly qualified men in this country is due to our present unsystematic and inefficient mode of architectural training ; and so long as we remain without properly organised and properly administered schools of architecture we may anticipate that the work of the better-trained foreign architect will be more and more in evidence in the United Kingdom.

Recognising this fact, it is imperative that the architectural profession should seriously consider what steps can be taken to cope with the difficulty. It seems to us that, following the formulation of a sound and comprehensive scheme of architectural education, the Government should be approached to give its financial support to enable the scheme thus put forward to be realised in its entirety.

We are aware that the British Government rarely, if ever, does anything in the cause of art ; but in this particular case it might be induced to see what foreign countries have long ago realised, viz. the undoubted fact that good architecture is a national asset, and as such State assistance to art education has proved a sound financial investment.

But however good such a scheme may be in theory, and however well endowed, all would go for nothing unless the direction of the students' work were under the absolute control of specially trained men. Handicapped as they have been in the past by the non-existence of any schools for the advanced study of their art, the architects of this country cannot be expected to furnish the necessary teachers.

It would seem, therefore, that upon its inauguration a National School of Fine Art would have to rely upon obtaining professors from foreign countries. To those who do not know the details of the system of architectural training which has been carried on so long and successfully in France, the following brief description of the curriculum of study at the Ecole des Beaux-Arts may be of interest.

After a competitive entrance examination for admission, the student in architecture attends a course of lectures on each of the following subjects : Mathematics ; Descriptive Geometry ; Stereotomy ; Physics ; Chemistry and Geology ; Construction ; Perspective ; Building Regulations ; History and Theory of Architecture.

In addition to the foregoing subjects, which are specially applicable to the training of architects, it has been wisely felt that as architecture is but one branch of art, it is necessary that its exponents should receive at least some instruction in the sister arts of painting and sculpture.

As the architectural student receives his specialised instruction, so in like manner do the painters and sculptors become specialists in their separate arts. But prior to this specialised training all students of the Ecole des Beaux-Arts, whether painters, sculptors or architects, are obliged to attend a course of study on design, modelling, elementary architecture, literature and decorative design.

By adopting this method of training, painters, sculptors and architects are taught at an early age to appreciate the merits and necessary limitations of their colleagues' work. The exponents of the three arts thus become accustomed to work together, and it is only by this appropriate application of their united efforts that a homogeneous and thoroughly satisfactory artistic result can be obtained.

To compare the results obtained under this methodical training with those that follow the haphazard system (or want of system) in vogue in this country is not only humiliating and depressing, but shows that our much-vaunted commercial instinct in this instance is disastrously astray.

This is only one aspect of the many problems relative to the welfare of the architectural profession which show the urgent necessity of obtaining statutory powers to enforce a satisfactory system of architectural education. So long as we are content to see untrained men allowed to practise in this country, just so long will the decadent period of architecture now existent be apparent.—

Yours faithfully, GEORGE HUBBARD [*F.*].
A. W. S. CROSS [*F.*]

A Clean Slate.

To the Editor, JOURNAL R.I.B.A.,—

7th May 1912.

SIR,—You have been kind enough to publish one or two letters from us bearing both directly and indirectly upon the vital subject of Registration.

Some of our friends think that we have perhaps expressed ourselves more strongly than the circumstances warrant, but, to our minds, when we review the paucity of the results attained by the Institute after some five years' consideration, we

are forced to the conclusion that the present serious position can only be satisfactorily dealt with by administering a drastic remedy.

The Council after much labour put forward a scheme for the Revision of its Charter and By-laws so as to make it possible for the Society of Architects to be incorporated with the Institute. This labour has had a futile result, as the Institute, by a large majority, declined to sanction the incorporation of the Society. In fact the compromise which was made between the Registrationists and anti-Registrationists has completely broken down, as was almost inevitable from its very inception.

No great cause has ever been won without a corresponding expenditure of energy, and we hope that the vast majority of the members of the Institute who have the cause of Registration at heart will not be discouraged by the fact that there is absolutely nothing to show for the immense amount of time which has been expended upon it.

Now is the opportunity to rub out the faint scratchings upon the slate which are generally unintelligible. What is wanted is a clean slate—on this should be mapped out in clear and unmistakable lines a programme framed to satisfy the members of the Institute as well as all others whose claims are properly entitled to consideration.

There is no getting away from the fact that the combined wisdom of the members of the Institute must in the end evolve the only workable policy, and it seems to us that there is no other way of obtaining this combined wisdom than by holding a series of General Meetings in which Provincial Members, who carry on their work under greater difficulties than their London brethren, are well represented. By this method clear and unmistakable lines may be mapped out on a clean slate, and then, and then only, will be the time for Committees to be formed in order to give effect to the policy of the General Body.—Yours faithfully,

A. W. S. Cross.
George Hubbard.

The Registration Downpour.

To the Editor, Journal R.I.B.A.,—

Sir,—In the Journal of 23rd March, the following sentences occur in articles by different contributors. No. 1 writes: "It follows that the exercise of our profession must be confined to men of some social standing."

No. 2 writes: "So, in the present day, the craving for wealth crushes the right spirit, and art cannot flourish as she would. Just as the undue accumulation of wealth brought about the downfall of the monasteries and of Gothic architecture, so will it bring about the downfall of what are sometimes called the governing classes." "Man has forged bands of iron to his hands, his feet, his neck, and he has forged chains which hold him tight in prison."

The choice of these passages has no bearing upon their contexts, with which this note has no concern, and no apology is needed for their appropriation. They have been chosen merely as representative of the sort of thing one reads and hears *ad nauseam*. The first creed is simple and honest, if stupid. It clears at once the whole horizon by the ease with which it closes the door to all who cannot afford to open it. It assures the favoured ones of fat respectability, the present want of which is so much to be deplored. Architecture will indeed be an enviable calling when it has been raised to "some social standing."

The second presents a totally different point of view. It is more catholic. It is grander in its manner, but much sadder. It is a crying in the wilderness; it wanders hither and thither with its burden of sorrow, fixing no policy, deluging mankind with utterances; pure verbigeration, which, as Chambers puts it, is "the morbid and purposeless repetition of certain words and phrases at short intervals."

The one calls for registration, the other for regeneration. The great question is, which shall we follow? Shall we seek the smug reality of the first, or wander with the phantom of the second, which, by its own telling, is so ill-fitted to these days; so stupefied by the terrible incubus of "undue accumulation of wealth," that it lies in prison fettered, neck and crop, by innumerable chains? It is odd that architecture should lose by wealth, if wealth finds vent in architecture, which it assuredly does. But this is shallow argument, the Socialist will tell us, and so, for want of deeper insight, it will suit the present purpose to admit ignorance. Truly it is a difficult mess.

The probability is that some kind of low compromise will influence us and the banality of the first will win, veiled by "the morbid and purposeless repetition of certain words and phrases at short intervals" in which due concern will be evinced for the welfare of "the Mother Art." We can then fatten, while she starves. Poor old body! We have had her so long and she is now so wizened that she cannot surely last much longer.

So shall we uphold the passing of the Act with its scheduled minimum, in accord with these days, to raise architects, "willy-nilly," from social disrepute to "some social standing."

The Society of Architects recently issued a statement wherein is declared that "fusion (with the R.I.B.A.) is not essential to joint action." It takes its stand as "a powerful and strongly established institution" which "has its own premises." It will have none of us—and who can wonder at it?

The R.I.B.A., though less exclusive, can also claim to be "powerful and strongly established," having, as proof of it, "its own premises." If it has now nothing else, surely it can make an effort to regain some of its independence by restraining this registration downpour, which has well-nigh buried all beneath its accumulated silt.

Yours faithfully,

8th May 1912. Arch. C. Dickie [*A.*].

Architectural Library

University of Virginia.

RECENT UNIVERSITY ARCHITECTURE IN THE UNITED STATES.

By Ralph Adams Cram, Litt.D., F.A.I.A., F.R.G.S.

Read before the Royal Institute of British Architects, Monday, 20th May 1912.

IT would be impossible for me to express in any adequate fashion my deep appreciation of the honour you do me in asking me to supplement, in some small degree, the penetrating and comprehensive Paper Mr. Warren already has read before you,* with a consideration and a showing of that other collegiate architecture over-seas which, as he so justly says, is in its impulse and its achievement a natural continuation of British tradition. We have in America, as you in your Colonies, the residential college—the early, the perfect, the indestructible type—elsewhere abandoned, and with great loss in respect to those results in character-building (and therefore national civilisation), for which no intensive scholarship can ever make amends. The foundations of sane and sound and wholesome society are neither industrial supremacy, nor world-wide trade, nor hoarded wealth; they are personal honour, clean living, fearlessness in action, self-reliance, generosity of impulse, good-fellowship, obedience to law, reverence and the fear of God—all those elements which are implied in the word "Character," which is the end of education and which is the proudest product of the old English residential college, and of the old English educational idea that brought it into being, maintained it for centuries, and holds it now a bulwark against the tides of anarchy and materialism that threaten the very endurance of civilisation itself.

From time to time we have yielded more or less to novel impulses, coquetting with that questionable lady sometimes known as the Spirit of the Age, accepting even her insidious doctrine that after all the object of education is not the building of character, but the breeding of intensive specialists, or the turning of a boy at the earliest possible moment into a wage-earning animal. We still hold to the damnable opinion that education may be divorced from religion, and ethics inculcated apart from a dogmatic religious faith; and, having sown the

* "Collegiate Architecture," by Edward Warren, F.S.A. (Journal R.I.B.A., 24th Feb. 1912).

wind of an insane secularism, we are reaping the whirlwind of civic corruption and industrial anarchy. I do not mean to say that we were alone in our error: you yourselves know that across narrower seas than the Atlantic the same is true, and in greater degree; while even here, in these narrow islands that so often have been the last refuge and stronghold of Christian civilisation, I have heard strange rumours of those who would sacrifice Latin and Greek and the humanities to applied science and vocational training; who would drive the very name of religion from the schools; who would, in the ringing words of an eminent French statesman, "put out the lights in heaven," and, to quote Karl Marx, "destroy the idea of God which is the keystone of a perverted civilisation." We have, I think, rather got beyond taking this sort of thing seriously, and I doubt if you ever will do so even for a moment, for when we stop doing things long enough to think, we all realise that, as the Dean of St. Paul's has recently said, "The real test of progress is the kind of people that a country turns out," and the product of secularised and intensive education is not of a quality that develops a sense either of covetousness or emulation in sane and healthy minds.

So, in spite of our backing and filling, we are, I think, in America well beyond the turn of the tide. I myself have seen it at its flood, and I have seen the ebb again. It is not so long ago that our ideal seemed to be a kind of so-called education that might be labelled "Made in Germany": we prescribed nothing, and accepted anything a freshman in his wisdom might elect; we joined schools of dental surgery and "business science" (whatever that may be) and journalism and farriery to our august universities; we ignored Greek and smiled at Latin; we tried to teach theology on an undogmatic basis (an idea not without humour); and we cut out religious worship altogether. It was all evanescent, however; now the "free electives" are passing, even at Harvard where they began and ran full riot: at Princeton the preceptorial system has been restored, and is coming elsewhere; there, also, a great college chapel is contemplated; while at the University of Chicago one is about to be built at a cost of some £300,000. Everywhere residential quads are coming into existence: one ancient college—Amherst—is considering the abandonment of all its scientific schools and falling back on the sound old classical basis, while lately our own American Institute of Architects has endorsed the principle that our schools of architecture should grant degrees only to those reasonably proficient in Latin.

And so we return step by step to the old ideals and sound methods of English colleges, return to the mother that bore us, just as we return year after year to our old home for refreshment and inspiration; return even in a wider sense to those eternally battered but eternally enduring principles in life and thought and aspiration which make up the great Anglo-Saxon heritage of which we proudly claim to be joint heirs with yourselves. And in this return we find ourselves recurring once more to the very forms of the architecture—or rather, we hope, to its underlying spirit—through which this great tradition has manifested itself. In our earliest days we followed, as closely as we could, the work going on at home; then we yielded to our new nationality and wandered off after strange gods—some of them very strange indeed—expressing our experiments in experimental styles, until the last shadow of a memory of England seemed wholly gone, and then, as the last flicker died, behold a new restoration, for with the reaction towards a broader culture comes the return to the architecture of Eton and Winchester, Oxford and Cambridge, that so fully expressed that very culture itself.

Consider for a moment and you will see that no other course was possible: not because the XVth and XVIth and early XVIIth century collegiate architecture of England is the most perfect style ever devised by man to this particular end. It is this, of course; but the real reason for our return lies deeper, and it is simply that it is the only style that absolutely expresses our new-old, crescent ideals of an education that makes for culture and makes for

character. I myself have been coming back to Oxford and Cambridge year after year now for a full generation, others for even longer terms, and every year I send, from my own and from other offices, boys and young men to the same shrines of causes, not lost, but gone before, who are all of them beginning the same cycle of periodicity that has marked the lives of their elders; and to all of us, young and old, these grey and wonderful cities mean, not great art alone, but even more, the greater impulse that incarnated itself in such personalities as Duns Scotus and Henry V.; Sir Philip Sidney and Sir Walter Raleigh; Grocyn, Linacre, and Erasmus; Laud and Strafford and Falkland; Hampden and Cromwell; the Duke of Wellington and John Keble and Cardinal Newman. For one thing we know at least, and that is that architecture, together with all art, is no matter of fashion or predilection, no vain but desirable amenity of life, but rather an unerring though perishable record of civilisation, more exact than written history, and the only perfect showing of the civilisation of a time. By its fruitage of art we know the tree of life, and further we know that this fruit is not seedless, but the guaranty of life to such ages as use it rightly. We love it for what it is in itself, more for what it reveals to us of a great past, most of all for what it promises our future. Art has dynamic potency; it records indeed, but it is evocative also, and we who would have Sidneys and Straffords and Newmans to redeem and defend and ennoble our civilisation use the architecture that is their voicing that it may recreate their spirit in a later age and in a distant but not alien land.

So much then by way of the introduction you did not bring me over-seas to say; and now let us turn to the work itself of which you expect me to speak.

And first of all let me show you from Harvard one or two examples of what we did for a beginning. It was not very much, I suppose, but we care for it extremely, just because it spells our own brief antiquity, while it was honest and sincere, and not without a certain pathetic element of far-away longing for an old but not forgotten home. English it was, of course, so far as we could make it, for we were all English—or rather British—in bone and blood and tradition, down to half a century ago. The old artistic impulse that had remained with man from the beginning was slowly dying for the first time in recorded history; it had been losing vitality ever since the Renaissance and Reformation, but it was still instinctive, and so remained until that Revolution, which included so much more than the French Terror, came to give it its quietus. This day—or night—was still far off, and in the XVIIth and XVIIIth centuries there was still exquisite delicacy and refinement and wealth of invention. I wish I could show you some proofs of this in the shape of domestic and ecclesiastical work from Massachusetts Bay Colony and Virginia and Maryland and the Carolinas, for it is true that little of this appears in our collegiate work. Here, funds were scant and dearly obtained, while the planters of the South and the great merchants of the North were more lavish in their outlay; as it is, our early college buildings make their appeal through their fine proportions and their frank simplicity.

Of course, practically all the XVIIth-century work, and nine-tenths of that of the XVIIIth, is gone, including much of the best, and we must recreate our vision of the past from shreds and patches; but fortunately at Harvard there remains a notable group that has yielded neither to vandalism nor conflagration. As would be seen from the plan of the old "Yard" the typical English quadrangular arrangement was abandoned for a grouping of isolated buildings, at first more or less formal, then developing into final chaos as other men with other minds came on the scene and placed their buildings, and designed them also, at their own sweet will. As for the material, it was almost invariably brick, at first imported from the old country, for the visible stone supply in New England was intractable granite, and even where a kinder material was available there was in the beginning little skill in cutting, and later little money to pay for the labour involved. With few exceptions the trimmings of doors and windows and

cornices were of delicately moulded wood painted white, the Vignolan laws as to proportion being intelligently modified to fit the new material, while the roofs were covered with split shingles.

The first evidence of decadence appears, I think, in the advent of that more pompous style President Jefferson did so much to advance. Hitherto what had been done was done simply and unaffectedly: now came the conscious desire for architecture, which is a dangerous ambition at best. At the University of Virginia we have the original setting-out almost intact, and if we deplore the unnecessarily unreasonable classical porticoes with columns, entablatures, and pediments complete—and all built of pine boards framed up in the semblance of a newly discovered paganism—we must admit the great dignity of the plan and the singular charm of the "ensemble."

HARVARD UNIVERSITY.

This "Jeffersonian" style rapidly took the place of the old Georgian; but its day was brief, and somewhere between 1820 and 1830 occurred that ominous point when the last flickering tradition of good taste and the last weak impulse of instinctive art vanished—for the first time in history—and the new era began wherein the desires and predilections of society as a whole were no longer for good things and beautiful things, but explicitly and even clamorously for bad things and ugly things, while the uncertain offices of the architect were the only agencies that from time to time redeemed the general chaos.

Fortunately there was little collegiate building with us during this dismal second quarter of the XIXth century—or, rather, and also fortunately, little of it has survived;—and when first the architect appears on the scene as the mentor rather than the exemplar of public opinion, it is in novel guise—nothing less, indeed, than as the protagonist of Gothic. He was not *very* Gothic, I must admit, and in the beginning he contented himself with a few apologetic and quite casual buttresses, pointed arches over his door and window openings, an

octagonal turret or two, and, of course, battlements, usually of two-inch deal neatly painted, and sometimes sprinkled with sand as a concession to appearances. What took place in domestic and ecclesiastical architecture I dare not even reveal to you, but the college work was a shade less horrific, for sometimes, as at West Point, it was of stone, and good stone-work will cover a multitude of sins—as it still does in our own day and generation, I believe.

Perhaps it is hardly fair to attribute this first "Gothic" to architects; really it was the work of the ambitious builder, who, after crystallising under the immortal Batty Langley's handbooks on classical architecture, suddenly expanded with almost explosive force beneath the influence of that amazing work of the same gifted author wherein he reduces Gothic also to a system of "orders," and demonstrates how by a few simple rules one can easily learn to produce "genteel and appropriate structures in the Gothic Taste." But the Oxford Movement and Pugin's Gothic Revival soon passed beyond the admirable Batty Langley, and the influence of Pugin himself entered America, largely through a really great architect, Upjohn. I think he did no collegiate work, but John Ruskin produced those that did, and from the close of our war between the States down to about 1880 the new Gothic that expressed his really enormous influence might be said to have run riot through our colleges. There were those like Renwick and Congdon, and Mr. Haight, who is still living, that held conscientiously to the grave and archæological type established by the Pugins; there were others who tried to incorporate Ruskinian doctrines in more personal, original, and mobile work, as Blomfield and Butterfield were doing here in England; the results were at least lacking in monotony, but few of them achieved the simplicity and the dignity of Mr. Haight's work, while many of them reached a point of violence and anarchy hardly to be matched in history.

It was all a "false dawn," however, and ceased almost in a moment (though for a brief period only, as we shall see) when that great genius and greater personality, Richardson, flashed like an unpredicted comet across the sky. The later 'seventies were desperate, no less, and the group of conscientious men could not withstand the flood of falsity and bad taste and artificiality that involved the whole art of architecture. Richardson alone turned the tide, brushed away the whole card-house of artifice, and deliberately forced a new and alien style on a bewildered people. He did great work, some of it immortal work, in his powerful mode, but he died before his mission was accomplished, and though he killed the "French roof style" and the futile Gothic, and all the other absurdities, he left behind no one of his own calibre to carry on the crusade, but instead a multitude of imitators who, though at first doing fine work under the memory and inspiration of their master, gradually turned away into other fields, leaving the Romanesque propaganda to the most inadequate exponents imaginable. For a decade we wallowed in Lilliputian cyclopeanism, and then, to change the simile, the summer storm swept west and south, and over the desolation it had left loomed, almost simultaneously, three new tendencies—Colonial, Perpendicular Gothic, and "Beaux-Arts." Three less well-assorted bed-fellows it would be hard to find, but with a magnanimity rare in history these three rivals more or less succeeded in establishing a *modus vivendi*, Colonial taking over part of the new, and again triply divided, Gaul in the shape of domestic work, Gothic annexing so far as it could all collegiate, scholastic, and ecclesiastical building, while to the Beaux-Arts propaganda fell all it could get of the rest—particularly Carnegie libraries, town houses, and banks. As a matter of fact, this partitioning of architectural activity was not the result of amity, nor was it in the least definitive; the Colonial style claimed the patronage of our Nonconformist brethren (with show of reason and propriety); Gothic tried vainly to break into the library fold; while the Beaux-Arts architects made unavailing eyes at the Church, and, indeed, claimed everything in sight. Their pretensions did not go without questioning, however, for in the meantime the old and most classical classic was reborn (it had never wholly died), and, at the hands of that great man Charles McKim, it suddenly achieved

a height of serene nobility where it could and did challenge the claims of its rivals. And there were other claimants for the architectural crown now so completely "in commission"; there was the Spanish pretender, with its doubtful offspring, the quaintly denominated "Mission style"; there was the secessionist Americanism of the inspired but unguarded Mr. Sullivan; there was a kind of neo-Byzantinism; there was a hidden but persistent Japanese propaganda. In fact, I was wrong when I said that the Architectural Gaul was divided into three parts; it was not such a triple partition that confronts us now; it is an omnivorous eclecticism that bears some of the earmarks of anarchy. To use one of our own phrases, "everything goes," and much of it goes exceedingly well, amazingly so in fact, but the result is somewhat lacking in the qualities of unity and lucidity.

Columbia University Library, New York.
(McKim, Mead, and White, architects.)

Fortunately we have to do with few of the varied schools, for though all of them have footholds in the several colleges, only two have established their claims—Georgian and Gothic—and at the present time the latter has the call and has produced the most notable results; it may almost be said that except where lack of funds or climatic conditions argue against Gothic, this has the field absolutely to itself. The ascetic and fastidious classicism of McKim created Columbia University, and occurs sporadically elsewhere; the "Boulevardesque" of the Beaux-Arts men appears in a single building at Yale, in the slow-growing University of California and in the Naval College at Annapolis; Spanish elements go to the making of Leland Stanford, and in Texas my own firm is doing "a deed without a name"

that you must judge for yourselves and justify, if you can, and as we do ourselves. Elsewhere it is, as I said, Georgian or Gothic, and to the college trustee it is now the question "under which King, Bezonian?" Harvard, after swinging the circle of every possible architectural dogma and heresy, has settled down, as she should, to Georgian, as has Williams, and as have so many of the smaller and poorer preparatory schools and colleges, particularly in the South; but Yale, West Point, Pennsylvania, New York, Princeton, Bryn Mawr, Washington University, St. Louis, and Chicago, together with all the larger preparatory and Church schools, and the newer Roman Catholic institutions, are uncompromisingly Gothic of the type made immortal by Winchester, Eton, Oxford, and Cambridge.

Before showing you the nature of this work, it may be well to examine a typical American University, in its setting out, in its component parts, and in its organisation. I will choose for this purpose Princeton, of which I am a member by adoption, and where I have the honour

The United States Naval Academy, Annapolis.
(Ernest Flagg, architect.)

to act as Supervising Architect. The title itself will indicate at once one of the many points of divergence between the English and American systems, for I fancy there is no University in the United Kingdom where one man is given almost complete authority over all matters of the choice of architects, supervision of their work both in design and execution, acceptance or rejection of gifts, and their placing if accepted, the development of roads and paths, and the planting of trees and shrubs. Until recently such an office was unknown in America, but since Princeton took the lead some five or six years ago, others have followed rapidly, and the practice has now become an established custom.

It was time, too, that something should be done; as I have already indicated, our colleges are like Topsy, they "just growed," without rhyme or reason, subject to the most vacillating fashion and the quaint whims of emancipated individuals, and the results were generally shocking. In the plan of Princeton, as it was when I was put in charge, you will easily see how lawless had been the growth, and conditions were even worse at Harvard and Yale. You will note at once from the wide spacing and the lack of co-ordination another

point of difference; with us almost every college has begun in open country, as an original foundation. We have nothing like Oxford and Cambridge, partly because of this fact, and partly because each college is with us a unit; we have no gathering together of many and independent foundations, loosely knit together for administrative purposes; we have, instead, self-contained units, sometimes of enormous size, and each new benefactor founds, not a

A Plan for the Architectural and Topographical Development of Princeton University.
(R. A. Cram, Boston, Mass., Supervising Architect.)

new college, but a dormitory, a library, a school of law or medicine or forestry or—journalism. Personally, I think this plan must be abandoned, and a breaking up into more manageable units take place. It seems to me demonstrable that in schools that have from four to six thousand students half the character-building qualities of education are lost, and that the personal element must be regained by breaking up these unwieldy masses into working units of not more than two hundred men each, at least for living and social purposes. This was attempted two years ago at Princeton, but the time was not ripe and the reform failed; but

Stafford Little Hall, Princeton University (Cope & Stewardson, architects).

Quadrangle of Holder Hall, looking northward (Day Bros. & Klauder, architects).

PRINCETON UNIVERSITY, NEW JERSEY.

the leaven is working at Harvard and Cornell and elsewhere, and is, I think, within measurable distance of accomplishment.

In the new plan of Princeton, which shows the University as it now is, and indicates its future lines of development, you will see at once how strong the tendency is towards the standard type; here the dormitories are assuming quadrangular form, and in time may become full residential colleges, each with its common room and great hall, and, when times have still further changed, its chapel. In the beginning our dormitories were simply barracks, with living rooms opening off long halls, with remarkable results, so far as order and discipline were concerned. Now the "entry" type is almost universal, the type that holds in England, while the old sequence of regular cells serving both as study and bedroom for one or even two men, with a common *necessarium* two or three hundred yards away, has given place to the standard type of suites of a study and two bedrooms for two undergraduates, and a study and bedroom for each graduate student. In the former case each stairway is separated from the next by a party wall, unbroken except in the basement, to which all staircases descend, and here a general corridor gives access to groups of baths and toilets, and to the boxrooms, and to the other staircases in the quadrangle as well. In the newest of our buildings for graduate students every two suites have a private bath between. Of course, we pride ourselves very much on our plumbing, and I sometimes wonder if we are not becoming almost Roman in our luxuries for bathing; it is possible we have gone too far, and that in time we shall return to more Spartan arrangements; but at present there is no denying the fact that we give nine-tenths of our students more than they are accustomed to at home.

Princeton University: Campbell Hall.
(Cram, Goodhue & Ferguson, architects.)

Another thing that will strike you is the magnificence of our gymnasiums and the dominating quality of our schools of science. There is really a rivalry amongst our schools as to which shall have the biggest and most perfectly equipped gymnasium and swimming pools, but this is partly excused by the fact that our winters are so severe that for three or four months skating, snow-shoeing, and ice-boating are about the only possible forms of outdoor

exercise. Then we have general physical directors, as well as special trainers for the varied forms of athletics, and in many colleges regular and searching examinations of the men for physical and functional weaknesses, and as a result the health of our schools is well above normal. As for our science buildings, you know, as we know only too well, how almost unbalanced we have become in our devotion to practical and " vocational " training, and how obsessed we have become with the mania for natural science. Here at Princeton there is less of this than elsewhere, but two of our newest and most magnificent buildings are devoted, the one to biology, the other to physics, though as yet we have no schools of mechanical and electrical and mining engineering, as happens so often elsewhere.

One novelty you will not notice on the Princeton plan, and that is the clubs and fraternities. We have as many " Greek Letter Societies " (which are very awful and very secret organisations) as we have colleges, and there are some institutions in America where these fraternity houses almost outnumber the academic buildings themselves. At Princeton no Greek Letter

Princeton University, New Jersey: Graduate College.
(Cram, Goodhue & Ferguson, architects.)

Societies are allowed, but there are two old secret organisations, the Whig and the Clio, whose white marble mausoleums form the very centre of the campus, while to the east stretches a great street absolutely lined with the private clubs which grew up when the fraternities were taboo. These clubs take in only a certain number of new members each year, they are distinctly aristocratic in their tone, though aristocratic of a sound and healthy type, and the buildings generally follow the lines of an old and palatial country house.

From all these points of difference you will see then that our American University is a very different matter in its architectural form from those in this country. Our newest Graduate Colleges come nearer, as you will see when I show you the now rising buildings for Princeton which lie half a mile to the west.

In the meantime let us examine the beginnings of what has been a notable Gothic Renaissance amongst our colleges—and we need not forsake Princeton to do this, for it was here, in the shape of the new Library, that it came into being. Alexander Hall had just been completed in the verbose and turgid style that followed the memory of Richardson like a Nemesis,

and the same architect was given orders to abandon this and revert to what we sometimes call "Oxford Gothic." It was not a style with which he had either sympathy or familiarity, and he produced a work which, while acceptable in its mass and general composition, fails sadly through its coarse scale and its mechanical ornamentation. Almost simultaneously, however, certain new dormitories were put in hand—Blair and Little Halls—and here the architects were two young men of Philadelphia, who most unaccountably could think and feel in Gothic terms. I like to record their names whenever I can—John Stewardson and Walter Cope—for in addition to being singularly lovable fellows, they were geniuses of no inferior order; they brought into being at Princeton, Bryn Mawr, and the University of Pennsylvania structures that are to me singularly beautiful and inspiring, and they left their mark for all time on

St. Paul's School Chapel (Henry Vaughan, architect).

American architecture. Both are dead, and at a pathetically early age, while the profession of architecture is the poorer thereby.

About the same time a transplanted Englishman, Mr. Vaughan, sometime pupil of that immortal master of the new Gothic, George Bodley, and still with us, I am glad to say, began the introduction of the same style into our great preparatory schools, which you here would call "public schools." His work at St. Paul's marked a new era in this category of scholastic architecture, and was continued later in more sumptuous fashion at Groton. My own firm has been following his leadership in the Convent School of St. Mary, at Peekskill, and the Taft School in Connecticut, while there are innumerable examples of the same sort of thing all over the country.

It was really Cope and Stewardson's work at Princeton that set the pace, however; and so beautiful was it, so convincing as to the possibilities of adapting this perfect style to all modern scholastic requirements, that the University authorities, with a wisdom beyond their generation, passed a law that for the future every building erected at Princeton should follow the same

general style. Seventy-nine Hall, Patton, McCosh, and the Gymnasium followed in quick succession; then came the great Palmer Physical Laboratory, the Biological Laboratory—Guyot Hall—Upper Pyne, and Lower Pyne; and a little later, after I had become Supervising Architect, Campbell Hall, by my own firm, and the altogether wonderful quadrangles of Holder and Hamilton Halls, by Messrs. Day Brothers & Klauder, of Philadelphia. I do not hesitate to say that to me these latter buildings mark almost the highest point achieved in Collegiate Gothic in modern times. When the great quads are completed, we shall, I think, confront a masterpiece.

The most recent Princeton work is the great Graduate College my own firm is now building on the crest of a low hill, half a mile from the college campus, and commanding a gently sloping lawn of about eighty acres. This new college is of course only for graduate students; it has an endowment of over £500,000, it is conceived and organised on the most liberal, cultural, and scholastic lines, far away indeed from the popular schemes of "voca-

Chicago University (Shepley, Rutan & Coolidge, architects).

tional" training, and it should go far towards restoring the balance in favour of sound learning and noble scholarship. The plan shows only the work now in hand, the first quad, with the Great Hall and its kitchens, together with the Cleveland Tower, which is a national memorial to one of our greatest Presidents, who spent his years, after retiring from office, in Princeton, as a Trustee of the University and a devoted friend of the new Graduate College on the lines that had been determined by its Dean, Dr. West. At present the placing of the great tower seems a little too like that of the Victoria Tower at Westminster to be wholly satisfactory, but in some distant future a second quadrangle will be constructed to the south and east, containing the Chapel, the Library, and quarters for Fellows, which will restore the tower itself to the centre of the composition. Some day, also, a third quad will be developed to the north-east, and then the group will be complete, for the Dean's Lodgings, with their private gardens, to the south-west of the Great Hall, are already under construction.

Let us now turn from Princeton to some others of our many colleges; but before we take up the Gothic tale, let us see what has been done in other stylistic directions, for I would not give you the idea that the restoration of what one of your own great Gothicists, Mr.

Champneys, has called so well the "Oxford Mixture" is all plain sailing, or that splendid work has not been done in other directions. Columbia University in New York—the old King's College of Colonial days—stands of course as the noblest type of the pure classical idea, and its majestical Library will always remain a national monument. Unfortunately, the site is crowded and fatally restricted: the mistake was made of fixing this—when the change was necessary a generation ago—too near the outposts of the advancing city, which, like a conquering army, has already swept up to its gates and miles beyond. For myself, I cannot imagine a great centre of higher education in the howl and war of a great city, or anywhere, in fact, except in the quiet country or in the village environment it has built for itself, and I fancy another generation will see another moving on of Columbia; and when this happens I venture to predict that, in spite of the grave and scholarly mastery of McKim, Mead, & White's work,

Andover Theological Seminary, Cambridge, Mass.
(Allen & Collens, architects.)

the new housing will be on the lines that Oxford and Cambridge have not only made their own, but universal and eternal.

There is little else that is purely classical amongst our Universities; though Carrère & Hastings have built a most engagingly Parisian Alumnæ Hall at Yale, the Naval Academy at Annapolis is strictly French, and the University of California is growing on scrupulously Beaux-Arts lines afar on the Pacific Coast. Georgian, however, has established itself as a determined rival of the "Oxford Mixture," and some of its products are not only logical and lovely, but genuinely scholastic as well. Harvard, as I have said, is conscientiously following this line, and so is Williams, where we ourselves are trying to show we have no hard feelings by building a Commencement Hall, and a new quadrangle, in this quite characteristically American style. In Virginia, also, we are slowly constructing a great college for women, while we are using the same style for another of our oldest and most famous "preparatory schools" at Exeter, as well as at yet another girls' college, Wheaton, in Massachusetts. Georgian also,

with rather quaint Roman elements, has been used by McKim, Mead, & White for the vast War College at Washington, and altogether it is, as we say in our colloquial way, giving Gothic "a run for its money."

The University of Pennsylvania shows still more of Cope and Stewardson's wonderful work, though here it is couched in an extremely rich Elizabethan vernacular, and I am sure you will admit that the style is handled in a magnificent and competent fashion. Here it is all red brick and yellow stone, and the same materials are used in Mr. Day's beautifully proportioned and very reserved Gymnasium. Bryn Mawr is again built of the wonderful stone that underlies all Pennsylvania and New Jersey, putting a premium on good architecture. Here in England all building stone is finely dressed, but in America we have adopted the practice of using "ledge stone" for our ashlar, our trimmings only being tooled. Fortunately, we have a wide variety of singularly beautiful stones, ranging in colour through all shades of grey, brown, purple, and tawny, easily obtained, inexpensive, and durable. In a way I think we gain a

Chapin Hall, Williams College, Williamstown, Mass.
(Cram, Goodhue & Ferguson, architects.)

richness in colour and texture that is obtainable in no other way, while we also acquire something of that effect of age, which is, after all, so essential a part of architecture.

Washington University, St. Louis, is later work of this same firm of Cope & Stewardson, after the latter had died, and, good as it is, it shows the loss of the peculiar poetry that marked everything Stewardson touched. The plan is exceedingly interesting and very masterly, you will admit. It was laid out *de novo*, and after our college authorities had experienced a change of heart. With Chicago University we come to another of those institutions where the reverse course was followed: here the first buildings were distributed without any regard to architectural effect, and Shepley, Rutan, & Coolidge, in taking over the work, have been badly handicapped. This is the most archæological of the "college Gothic" in America, accurate, conservative, and reserved. For contrast consider Mr. Post's "College of the City of New York," which is as poetical, fantastic, and imaginative as the other is austere and cautious. I am afraid I think that here is an example of carrying a good thing too far in the use of one stone for ashlar and another for trimmings. Here the ashlar is almost black (the trap-rock

that forms a great dyke along the geological "fault" that forms the Hudson River), while the trimming stones are not stone at all, but a pure white terra-cotta with a surface like ivory. In itself the design is so striking, so forceful, so full of life and spirit, one rather wishes it might have been expressed in materials of greater coherency.

Fortunately, both for education and architecture, practically all our collegiate work is fixed in the country, where there is land enough, and we are able to keep down to those modest walls and few ranges of windows that are so essential a part of the models we now follow: at Princeton, for instance, the residential buildings are seldom more than two stories in height, even when perhaps three would be better, but we are very afraid, and justly, of the aspiring tendencies in our light-footed land that lead to the building of Towers of Babel, sometimes, I regret to say, Gothic in style—or rather with passably acceptable Gothic detail. In one instance, however, that of the Union Theological Seminary (a Presbyterian institution), in New York, strange counsels prevailed as to site, and this was chosen well within the City, and where land already possessed an altogether artificial value. As a result the architects, Messrs. Allen & Collens, were confronted with the very grievous necessity of piling up their levels into a total with which, I think, Gothic, either in spirit or in method, has little sympathy. They have a fine chapel, however, and when the enormous corner tower is built it will probably do much towards reducing the other buildings to a more reasonable frame of mind.

St. Mary's School, Peekskill, New York.
(Cram, Goodhue & Ferguson, architects.)

At the beginnings of another Theological Seminary, Roman Catholic this time, Messrs. Maginnis & Walsh have already completed one building, the tower of which is, I think, very beautiful: the general plan is not yet wholly determined, but it includes a huge parish church, and will give a great opportunity for the architects to strike another blow for Roman

Entrance to Gymnasium.

Archæological Museum.

UNIVERSITY OF PENNSYLVANIA.
(Day, Bros. & Klauder; Wilson Eyre; and Cope & Stewardson, joint architects.)

Catholic emancipation. I should shrink from trying to give you any faintest idea of the career of architectural crime that has been led by the Roman Church in America until now—and the stars of promise are even yet dim and widely scattered. It has been a carnival of horror unbroken by any ray of light—except perhaps St. Patrick's and the Paulist Church in New York—but it is much that so good a thing as Boston College should come into existence, and it may serve as a leaven until we Anglicans in America, as you here in England, may have to look alive to prevent Rome outdoing us at our own game, which has always been good architecture and plenty of it.

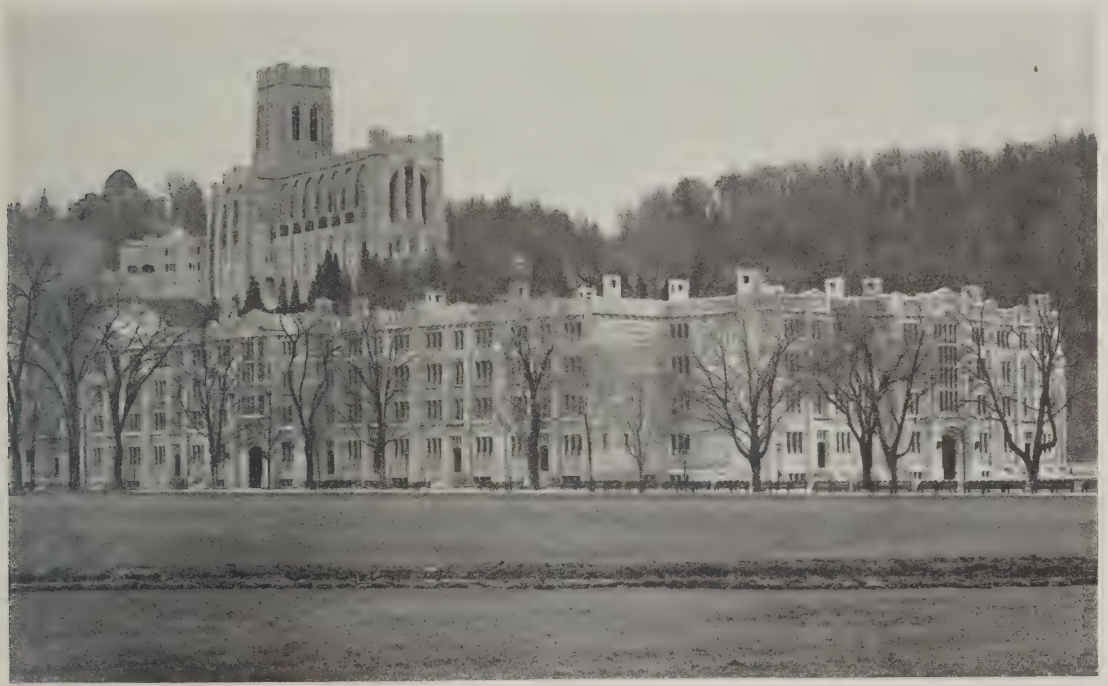
University of Pennsylvania, Philadelphia: Provost's Tower and Dormitories.
(Cope & Stewardson, architects.)

Near this Roman college, another great institution is rising, not strictly collegiate, though certainly educational, the "Perkins Institution for the Blind," where Mr. R. C. Sturgis is developing a singularly personal and intimate piece of semi-domestic Gothic.

In fact, as I said at the beginning, good Gothic is encroaching steadily on the preserves of Classicist, Boulevardier, and Colonial, and this in spite of the fact that, with the single exception of Harvard, every one of our schools of architecture absolutely disregards every type and phase of Gothic, both in design and in theory. Of course it can not quite be suppressed in history and archæology, but it is treated rather as the madcap escapade of a callow youth, and passed over as lightly as possible. In spite of this, architects do appear who love Gothic, and, what is more, know about it also. Religion clamours for it, education annexes it, and even, in one instance, the Government of the United States itself accepted it with alacrity, and has found it not half as bad as it looked. For an end, therefore, of this casual showing, I want to place before you some views of the United States Military Academy at West Point, of which, as a military training school, we are so inordinately proud. I cannot begin to give you any idea of the extravagant beauty of the site of West Point. It is like the loveliest part of the Rhine, only bolder and more dramatic. Mountains rise from the river on either hand, deeply forested, Storm-King and Dunderberg lifting highest of all; and on a narrow plateau, one hundred and fifty feet above the river, stands the Academy, its buildings forming a rampart along the cliff, and creeping up the mountain sides all around. Of course there wasn't anything one could do

there *except* Gothic—of sorts—though others had thought differently, as one who built there a lovely pagan fane like a dream of Imperial Rome. Moreover, most of the old work was pseudo-Gothic, and it had made a tradition—everything does this at West Point I am glad to say—so it was not startling after all that our classical Government should have endorsed a Gothic school.

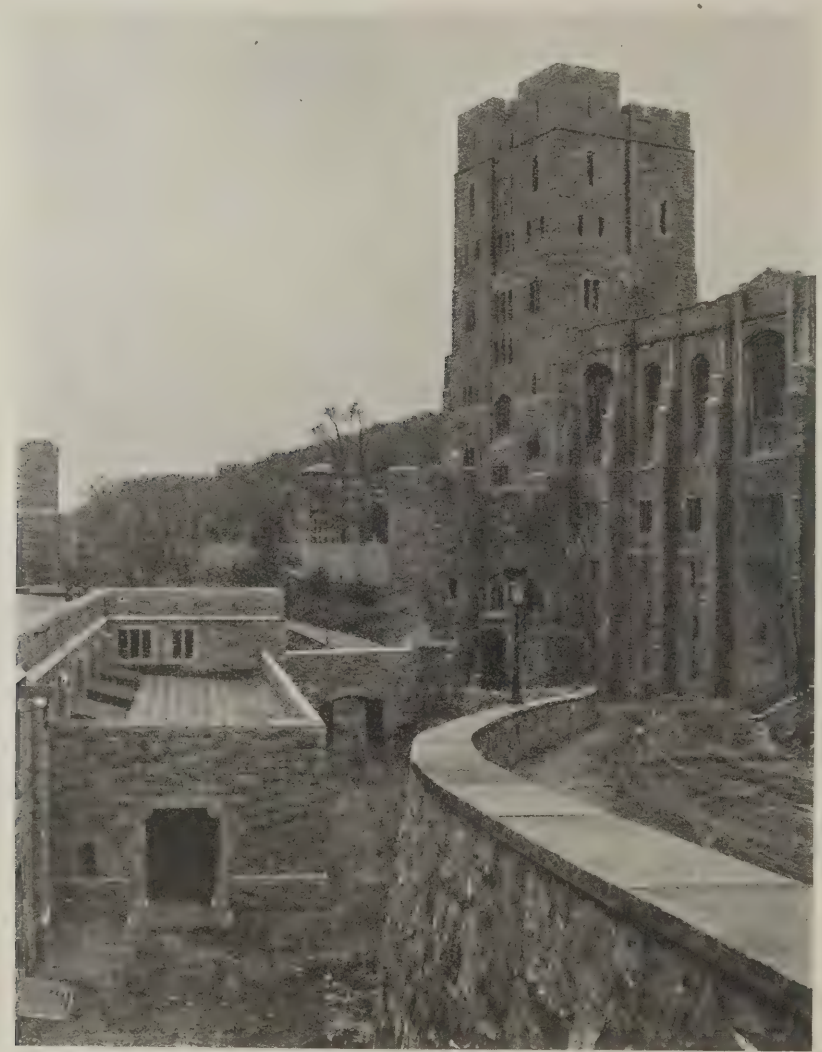
I am not sure they got it. I think the chapel on its crag, dominating the whole group, would pass, though it surely is not archæological; the site is compelling, however, and really what we tried to do was to translate the rocks and trees and ribbed cliffs into architectural form. In the interior there is perhaps something more of the scholastic quality: in any case it is all honest masonry throughout, floor, walls and vault, and it ought to stand for all time. Just what the cavalry and artillery buildings may be I do not know, nor does it much matter; they are an attempt to express outwardly their function, and in the simplest terms; the stables



U.S. Military Academy, West Point, N.Y.
(Cram, Goodhue & Ferguson, architects.)

sweep in an enormous arc around one side of the cavalry plain, and at the back, against the towering hills, are the barracks, one for each branch of the Service. The riding-hall is no more architecturally than a rampart of rock, heavily buttressed, and six hundred feet in length, a dimension that is prolonged to the south by the tower, and the power-house that breaks down step by step, along the coal-conveyor, to the water level and the railway tunnel. The cadet barracks are the result of an amour (perhaps illicit) between iron-clad military regulations, and a very free and easy Gothic, but their interminable ranges of windows and buttresses show not unpicturesquely through the great trees that border the infantry plain. The gymnasium is perhaps freer still, but not unpleasing in its colour, of tawny brick of a kind of velvet texture, and creamy stone trimmings. Unfortunately some of the most important work is not yet begun. There are scores of semi-detached quarters for married officers, from many of which the views are such as one crosses continents to see, but the new Academic building is not

yet finished, while no funds have been made available for the vast quadrangles of the quartermaster's department, the cadet headquarters which will, from the plain, form the structural base for the chapel (though this will be well behind and above), the hotel, and—most needed of all—the staff headquarters. This latter group will terminate the main axis, which will stretch a full half-mile from the landing on the upper level at the elevator tower and below the hotel, past the infirmary, between the old and the new Academic buildings connected by their vast triumphal arch with its niched statues, past the enormous post headquarters, and so across the middle of the infantry plain. The group will be made up of residential quarters for the superintendent, commandant of cadets, quartermaster, adjutant, and surgeon, all grouped around an open court that contains the State apartments of the President, the Secretary of War, and distinguished guests. There will be a great tower pierced by an arched sally-port, a banqueting room vaulted and walled in stone, State reception rooms, and all the other accommodations necessary at a place that appeals with singular force to all the people of the Republic, from its chief magistrate down to the humblest taxpayer.



U.S. Military Academy, West Point, N.Y.
(Cram, Goodhue & Ferguson, architects.)

Lacking these buildings West Point is, of course, quite incomplete, but it is worth seeing even now, and for my own part I think of the finished buildings the post headquarters is not the least interesting. It is built on the edge of the cliff, and the entrance by the base gate is four stories below the main court, which is entered from the upper level. It is a pretty big building, but it is wholly occupied by the administration of the Academy, and the military museum, and I want particularly to say that, massive as it is, it is all real masonry; it is no steel frame skeleton clothed indifferently with

a veneering of masonry; it is all of stone dug from the Reservation cliffs, and shot down to these lower levels.

And the same is true not only of the rest of the buildings at West Point, but of practically all the other work I have shown you as well. We do, indeed, indulge in skeleton construction, and reinforced concrete and other structural expedients and substitutes, but deep in our racial

U.S. Military Academy, West Point, N.Y.: Chapel.
(Cram, Goodhue & Ferguson, architects.)

consciousness, as in that of all other Anglo-Saxon peoples, is the solid conviction that after all there are but three real things in the world—the home, the school, and the Church—and that when we are dealing with eternal verities honest and enduring construction is alone admissible. And it is to the same consciousness I think that we may attribute the very universal return to Gothic of some form for our churches and our colleges and our schools. After all there have never been but three real styles of architecture in the West, noble in

impulse, organic in structure, perfect in detail, and these three are Greek, Byzantine, and Gothic; everything else is either a *patois* or a form of slang. Greek and Byzantine are in essence alien to our blood and temper, and Gothic alone remains. Over-seas, flushed with a new and half unconscious recognition of the hidden revolution that is slowly lifting the world out of materialism to the high free levels of a new idealism and spirituality, we instinctively revert to the very style which came into being to voice the old idealism and the old spirituality of the great Christian Middle Ages. Thus we have perhaps done little more than reproduce, recording our reverence for the great works of our common ancestors, in buildings that hold closely to type. We have not hammered out our own intimate style, or national and contemporary architecture, any more than have any other modern races and peoples, but this will come by-and-by. At present we architects are, I conceive, no longer as in the past the mouthpiece of a people, creating the visible form for a great dominating social impulse that is the mark of supreme civilisation; rather are we the voices crying in the wilderness, the pioneers of the vanguard of the new life, the men who recreate from antiquity the beauty that is primarily educational, that so it may work subtly through the consciousness of those who come under its influence, slowly building up a new civilisation that, when it has come full tide, will burst the shell of archæological forms, and come forth in its new and significant and splendid shape.

We have not now, nor have had for three centuries, a civilisation that demanded or could create such artistic expression, but the light is already on the edges of the high hills, and we know that a new dawn is at hand. In the meantime, like the monks in the dim monasteries of the Dark Ages, we cherish and conserve all that was great in our greatest past, building as well as we may new Oxfords and new Westminster Abbeys, new Lincolns, new Richmond Castles, new Haddon Halls, not as the last new word in architectural expression, but as schoolmasters and as prophets, content with the educational work we are accomplishing, leaving to our successors the equal but not more honourable task of voicing in novel and adequate form the new civilisation we are helping to create.

VOTE OF THANKS.

The President, Mr. Leonard Stokes, in the Chair.

Mr. EDWARD WARREN, F.S.A. [*F.*].—It is always a pleasure to welcome here a brother architect when he comes from a foreign and friendly country to instruct us; and where, as in this instance, he comes from a country which we are happy to regard as friendly but which we refuse to regard as foreign, the welcome is redoubled. I presume the honour of giving formal expression to our gratitude has fallen upon me because of the Paper I read in this room a few weeks ago on the evolution and development of the collegiate type of architecture as we know it here and in neighbouring countries. It is a far cry from the quiet grey quadrangles of Oxford and the brown old courts of Cambridge to these bright new examples, scintillating under the brilliant American light, which Mr. Cram has put before us. We feel at first a little bewildered by the flights of fancy in the scholastic direction which many of these buildings display. But it is with a certain sense of—may I say ?—titivation of our insular pride and of some considerable gratification that we have seen that the English ideal, that of the court, the quadrangle, and the gateway, largely predominates in these American examples. We congratulate Mr. Cram not only upon his interesting and brilliant Paper, but upon the magnificent opportunities, which he has so well used, and of which he has shown us such excellent examples. Anything more superb than the site he had to deal with at West Point it would be difficult to imagine, and we congratulate him on the way in which he has handled that opportunity. For the opportunity, after all, does not always make the man; it is the man who makes the opportunity. And I feel sure that Mr. Cram will understand that here in England, where these ancient things which we possess are cherished with pride, we are somewhat amused as well as interested to observe the reflex of the various forms so well known to us in the unfamiliar surroundings and in the unaccustomed light of America. I have never had the opportunity of making the acquaintance of these buildings except graphically, photographically, and by hearsay; for I am sorry to say I have not been to America, but I still hope that chance may come.

I must not detain the Meeting at this late hour, but will propose at once a most cordial vote of thanks to Mr. Cram for the immense trouble he has taken and for the brilliant Paper he has given us.

Sir ASTON WEBB, C.B., C.V.O., R.A. [*F.*].—I second with the greatest pleasure the vote of thanks to Mr. Cram. It is impossible to exaggerate the debt we owe him for coming to us with his splendid enthusiasm and showing us what is being done in the way of university building in the United States. Like Mr. Warren, I should like to congratulate him on the magnificent opportunities he has had, and upon the way in which he has used them. I am sure we are all immensely struck with that building of his at West Point. He has impressed us with his Gothic enthusiasm, and reminded many of us of the days when we ourselves were Gothic enthusiasts—I am not sure that I, for one, am not so still. Since then we have come to think that styles do not matter, but that "style" does. One is inclined to believe with Ruskin, that it does not matter whether a man takes three months to paint one single petal of a flower, or whether he covers a palace with colour in a single day, so long as he does it with sincerity and whole-heartedness. Perhaps we may say that with these university buildings the style which is adopted does not matter so much so long as the man who builds them is endued with sincerity and whole-heartedness, and with that enthusiasm which Mr. Cram himself possesses in so remarkable a degree. Oxford and Cambridge are full of other buildings than Gothic; perhaps there is more of the "other" than Gothic; but the whole effect, as Mr. Cram says, is eminently satisfying. As regards the buildings he has shown us this evening, when they have received those touches which Time alone can give—and to which our own university buildings owe so much—we trust they will vie with ours, and that our American brethren may equal what our ancestors—and theirs—have left for us here in the old country. I have only to thank Mr. Cram by seconding this vote, and to ask him to carry back across the sea our cordial wishes for the success of American architects in the great endeavour they are making in the erection of their university buildings, and which we are watching with such keen interest.

THE PRESIDENT: Mr. Cram has given us a very comprehensive and most admirable Paper. I will now ask you to convey to him our most hearty thanks, and to express in your usual manner how much we appreciate the trouble he has taken, not only in preparing his Paper and coming all the way from Boston to read it before us, but in collecting the magnificent series of slides he has shown on the screen and the drawings and photographs illustrating his subject which are exhibited in the adjoining room.

The resolution was carried by acclamation and with much enthusiasm.

THE PRESIDENT: I should like, if you will allow me, to add a word of thanks on my own account. As many of you know, I have recently been to the United States, and I assure you that the kindness which was heaped upon me there was almost overpowering. I went more or less as your President; at any rate they insisted upon receiving me as such, and would not let me go anywhere except as President of the Royal Institute of British Architects, and honours were showered upon me everywhere as your representative. I should like you therefore to endorse my thanks for the kindnesses which I received in America as your President. I have had the advantage of seeing some of the buildings Mr. Cram has shown us on the screen, particularly those at West Point; and, good as the photographs are, I would ask you to believe that they by no means adequately represent the beauties of the place or of the buildings. The situation is superb, and the buildings add considerably to the natural beauties of the surroundings. Mr. Cram has been somewhat hampered by the buildings which already existed on the site; some are good, others not quite so good, but Mr. Cram—or his firm, as no doubt he would wish me to say—is bringing the whole composition together in a magnificent way, and I can only describe the new buildings as splendid. I will ask you in conclusion to express your appreciation of the kindness which Mr. Cram and his colleagues showed to your President during his recent visit to their country. (Loud applause.)

MR. CRAM: What the other speakers have said already is, I think, sufficient excuse for me to say nothing at this late hour. It is difficult for me to express either my appreciation of the compliment you have paid me in asking me to come here and talk about some of the work we are doing in America; or, on the other hand, anything of my even deeper appreciation of the unfailing kindness and consideration that is shown me, as it is shown to all of my compatriots whenever we are so fortunate as to be able to cross the Atlantic, which, after all, is merely a geographical expression separating two peoples who are essentially, in all their principles of the past, the present, and the future, absolutely one people. I thank you very much indeed for your kind reception of my Paper and for your generous expression of thanks.

9 Conduit Street, London, W., *25th May* 1912.

CHRONICLE.

Annual General Meeting 6th May: Discussion.

The Minutes of this Meeting were published in the last number of the Journal, page 482. It remains to report the discussion which took place on the Annual Report:—

The President, in presenting the Annual Report of the Council, announced that since its issue the Records Committee had sent in a report of their work during the current session. The Council had approved this report, and he asked permission of the meeting to take it as read, so that it might be included in the Annual Report to be published in the Journal.

The Meeting having signified assent, the President formally moved the adoption of the Annual Report.

Mr. Henry T. Hare, *Hon. Secretary*, seconded.

Mr. Wm. Woodward [*F.*]: At the Annual General Meeting last year Mr. Davidge used these words: "Was it wise that the criticism"—that is to say, the criticism of the work of the Council—"should always come from one particular quarter?" Since then I have become a member of the Council, and you will agree with me, I think, that it would scarcely be fitting on my part to criticise the work of that Council whose meetings I have attended; it was rather my duty to criticise their work at the Council meetings themselves. But even that—and I have criticised their work in a very mild way—confirms the view of those who have preceded me on the Council, that unless you are a member of that body it is impossible to gauge the enormous amount of work which they get through. If you saw the fortnightly agenda I am sure you would agree that even the briefest consideration of its items must occupy a very considerable amount of time and labour. And were it not that our present President, who is not only an Art man, but a thorough business man, has a special faculty for getting through work of this kind, I can assure you that the agendas would be, as so many agendas are, referred from meeting to meeting until no adequate consideration of any of the items would be possible. Being a member of the Council, I propose to delegate to the younger bloods outside that body some of the work which I have thought right to take up for the last twenty-one years.—I only propose to deal very briefly with the Report, and there is only one particular matter, which I shall mention presently, on which I have ventured to disagree with the Council. The Honorary Secretary has already expressed our deep regret at the loss of Sir John Taylor. This is a loss which we shall all deplore. Those of us who knew Sir John will agree that a more genial, kind-hearted man it was impossible to meet. Then we have lost Thomas M. Rickman. I remember well the last words I heard from him were those in which he seconded a vote of thanks to Mr. Julian Rogers for a very excellent Paper delivered at the Surveyors' Institution; in little more than a fortnight after that speech our friend Rickman had passed over to the majority. We lament also the loss of our late Honorary Secretary, Alexander Graham. We all knew him and appreciated his genial manners and good-nature, and his labours during so many years for the benefit of the Institute. These are our older men, but we have also to lament the loss of some of our younger men.—On page 44 you will see that, comparing 1909 with the present year, we now have 29 Fellows less, 237 Associates more, and 10 Honorary Associates more, a total increased membership of 218. Adding 1,834 Licentiates, that brings up the total roll of the Institute in 1912 to 4,330. The decrease of 29 Fellows and the increase of 237 Associates make one deeply regret that those Associates who are eligible do not at once join the ranks of the Fellows, and so increase their power, and the revenue of the Institute also. There is a reference in the Report to Registration. I have sufficient knowledge of this matter to know that the Council have done their best to bring to an end the series of lengthy discussions which have taken place on registration and the union with the Society of Architects. My own personal view is that the matter should now be allowed to die a natural death, at least until it is revived in some other form. With regard to the Board of Professional Defence, I trust the time will arrive when the funds of the Institute will be sufficient to enable us to defend some of those actions-at-law which the poorer architect cannot defend, not from want of a good case, but because his pocket is not deep enough to enable him to do justice to himself in a Court of Law. The Schedule of Professional Charges is still *sub judice*, so to speak, and I do not know when it will be finished; but after all, from what I have heard of the discussion, there is not so very much to cavil at in the present schedule. With regard to town planning, I have already said here more than once, and in the Press too, that whilst Paris has voted 36 millions sterling for improvements in Paris, we in London have done nothing. The Town Planning Committee might take up the question of the improvement of Charing Cross. Trafalgar Square and the opening to the Mall would be a disgrace to any small community, but to such a wealthy community as our own and to such a city as London it is both disgraceful and humiliating.—The Henry Jarvis Bequest, referred to on page 45, is the only matter on which I have ventured to differ from the opinion, the unanimous opinion I think, of my colleagues on the Council. I had my opportunities at meetings of the Council to say what I had to say; but I should like to occupy your time for a few minutes by calling attention to the terms of the will. I am perfectly certain that those who have to deal with this bequest have done as they thought best in the interests of the youth of our profession. But I think you will agree with me that some portion at all events of the Jarvis Bequest might have been used to wipe out that very unpleasant financial statement that there is a bank overdraft of, roughly speaking, £9,000. I am not one of those who think that because of this overdraft the Institute is in a bad financial position. Not at all. But I think that here was an opportunity, whilst bearing in mind the evident wishes of Mr. Jarvis, for wiping out that overdraft and starting with a clean slate. And we might also by another process have allocated certain sums to the scholarships which Mr. Jarvis evidently desired. The part of the will relating to this bequest runs as follows: "And as to the balance of such annual income,

to pay the same to the Council of the Royal Institute of British Architects, to be devoted by such Council to the satisfaction of my residuary trustees to the best advantage of the Institute, coupled with the suggestion that either the said balance of annual income arising from such investments should be set apart for the founding of one or more travelling studentships to be called 'The Jarvis Travelling Studentship' or 'Studentships,' as a means whereby deserving students may be enabled to study the best examples of ancient and modern architecture; *or*,"—I call your special attention to the word "or"—"or that, after providing for the due payment of twenty guineas each annually to my acting residuary trustees, the portion remaining shall be devoted to the purchase of premises or buildings suitable for the headquarters of the Institute; so that of the corpus there shall always remain invested in the names of my residuary trustees a sum sufficient to produce an annual income of £100, to be devoted to the maintenance and upkeep of the premises to be so purchased or built. And in such case my said residuary trustees may set apart and devote so much of the corpus as may be decided for the purposes aforesaid." The Annual Report states that the Council have advised the residuary trustees to apply the available income to the foundation of Jarvis Studentships at the British School at Rome. I am sure we are all desirous of encouraging in every possible way the study of architecture. But let me tell you the means which now exist for such study, which did not exist some time ago. I cannot help thinking that sufficient account has not been taken of these. There are, for instance: (1) The studentships of the Royal Institute of British Architects, annual value £454; (2) Herbert Baker scholarship, £125; (3) British School at Rome, £400; (4) Architectural Association, £175; (5) Royal Academy, £315; (6) Royal College of Art, £132; (7) Glasgow Institute, £20; (8) Liverpool University, £150; and for the provinces a number of other small scholarships, say £200, bringing the total up to £1,971 per annum devoted to the furtherance of the study of architecture. I consider that that is sufficient to enable an enthusiastic young man of to-day to obtain all he wants in the way of encouragement. I need scarcely observe that Michelangelo and Sir Christopher Wren had none of these advantages, yet they certainly succeeded in producing works which we sometimes, I will not say copy, but which have influenced very largely some of the work of our own day. We have got something like £12,000 available from the Jarvis Bequest, apart from other payments which should be made in accordance with the directions of his will. I was of opinion, and am still of opinion, that the Council have done what they consider was the wish of Mr. Jarvis. But there was the little word "or" which I have referred to—a very important word in this connection. I consider that we might have devoted £9,000 to wiping out that wretched overdraft at the bank, and have devoted the remainder to such prizes and scholarships as the residuary trustees might have desired. That is the only item on which I have ventured to differ from the Council, and I endeavoured to get their resolution rescinded, but was not successful.—Coming to the finances, on page 45 the Report says: "The Auditors have framed their Report in such a form as to give the members an independent statement of the general financial position of the Royal Institute." The reason for the Report's taking this special form was that the professional accountant—who I know does his work exceedingly well, as a professional accountant does—renders the accounts necessarily from the strictly professional point of view of an accountant, and not in such a way as to make them understandable by outsiders. In the Hon. Auditors' Report, the financial position of the Institute is given clearly in a few words. I have been an Auditor myself, and therefore have the greater pleasure in bestowing a word of commendation on the work of Mr. Hudson and Mr. Burt. Their Report gives us a little more information than we had last year; and I hope that the same two Auditors may act for us next year, and give us a still more illuminating report. Passing to page 51, the Library statistics, the figures giving the attendances of readers and the number of books issued on loan speak eloquently for the value of the Library—no higher commendation could be desired by those who were instrumental in its foundation.—I have had occasion in years past to make some comments upon our officials, and since I have been a member of the Council I have had a better opportunity to appreciate their worth. You all know Mr. MacAlister, and those who have had occasion to ask him questions concerning the work of the Institute must have noticed the extraordinary grasp which he has of the details of that work, and will agree with me that it would be extremely difficult to meet a more courteous, a more gentlemanly and better-informed Secretary than Mr. MacAlister. I am sure it will be felt that that commendation is not at all too strong for the work he does for the Institute. Then we have Mr. Tayler. Whatever question you ask him he answers it directly, for he also has the whole of the details at his fingers' ends, and I trust that his health will be better, and that he will be with us many more years to give us the benefit of his knowledge and his courtesy. I have already referred indirectly to the work of the Library, because you will at once see that the success of the Library is due to a large extent to Mr. Dircks. The whole essence and value of a Librarian is that he shall have some knowledge of the particular book you desire on any subject. If you want to look up any particular subject, Mr. Dircks knows what sort of work you want and where to lay his hand upon it. I think you will agree with me in regard to Mr. Dircks that he is an official who we hope will be with us for a long time to come. The work of Mr. Northover is exemplified in the JOURNAL of the Institute. To mention only a detail of his editorial duties, those of us who have made, as I am doing now, a somewhat rambling speech in this room will agree that their thanks are due to Mr. Northover for the literary excellence with which these disjointed sentences are served up in the JOURNAL; and the longer he is with us the more he understands what we meant to say, and particularly what it is best to omit. Now with regard to our younger officials, those who in due course must necessarily succeed to the high positions, though I hope it will be many years before they do so, I trust they will look upon their seniors as examples of what should be in the way of officialism at the Institute, and that we shall have the benefit of their assistance for many years to come.

Mr. W. R. DAVIDGE [*A.*]: We all owe Mr. Woodward very sincere gratitude for his annual exposition, and I, for one, shall miss it on his promotion to the higher position on the Council. But if he will continue to give us his annual explanations and criticisms we shall be the better for it. It is only two years ago that I pointed out the danger of letting one individual acquire the prescriptive right to criticise or do anything of that sort. Mr. Woodward has, after twenty years, acquired that prescriptive right, and I think he may be looked upon, as he wishes to be looked upon, as an "ancient light"! In any case, we wish him every happiness in the easement which he has acquired on the Council, and we hope he will be able to do as good work there as he has done outside. As far as my criticism is con-

cerned, I should like to associate myself with every word Mr. Woodward has said as to our thanks being due to the Council and officers for their painstaking labours on our behalf. With regard to the general Report, I shall say little or nothing. But there are one or two points that I should like to emphasise, and which should be made clear in this Annual Report. One looks to find in annual reports a clear and succinct history of the year's work, and there are one or two things which can be made clearer still. For instance, under the heading "Registration" we read "Legal and constitutional difficulties made it necessary to lay before the members a proposal to obtain the Privy Council's sanction for a Supplemental Charter and By-Laws conferring the necessary powers on the Royal Institute." There is nothing in the Report as it stands to suggest that the proposal embodied the amalgamation of another society, and I think, in common fairness to those who come after, that that point should be made clear.

The PRESIDENT: Will Mr. Davidge tell us the words he desires inserted?

Mr. DAVIDGE: After the words "Royal Institute" I suggest the words "to amalgamate the two bodies."

The PRESIDENT observing that there was no objection to the proposal, the matter was put to the vote and carried.

Mr. DAVIDGE: With regard to the Jarvis Bequest, I think Mr. Woodward's remarks are perfectly sound, and should be considered by the members of the general body in addition to the Council. The bequest was specifically to be devoted to the best advantage of the Institute, and it is an open question whether a scholarship at Rome is to the best advantage of the Institute, although there can be no cavilling at any action which the Council or the trustees decide to take on the matter.

Mr. MAURICE B. ADAMS [*F.*]: As I understand it, the Council are not so free in the matter as would appear. When I was on the Council this question always appeared to be blocked by the unanimous opinion of the trustees. The Council could not do as they wished. When we embarked upon the expense of the alterations of the premises we thought that a considerable portion of the Jarvis Bequest could be devoted to this purpose. Subsequently the Council found they were not so free, and they were obliged to agree to what the trustees appeared to insist upon.

Mr. ALBERT W. MOORE [*F.*]: Who are the trustees?

The PRESIDENT: Sir Aston Webb, Mr. Searles Wood, and Mr. Pasmore, solicitor.

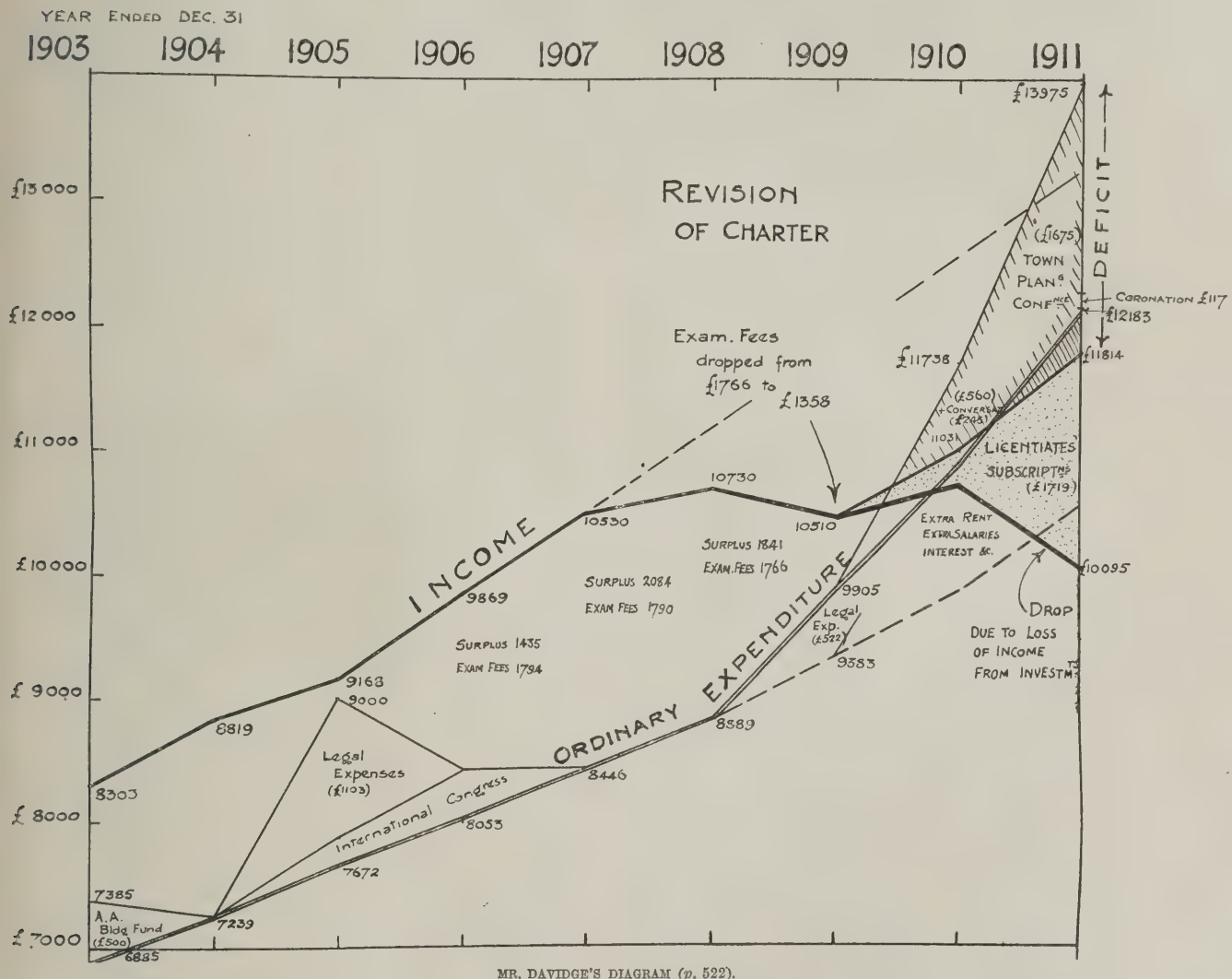
Mr. DAVIDGE: I want specially to emphasise the question of finance. I have looked through all the accounts of the Institute published in the JOURNAL for the last nine years, and plotted them for my own information on paper. The diagram [see p. 523] proved so instructive and I got so much information from it that I thought other members might like to see where we come from as regards finance, where we have travelled, and where we are going to. The thick line at the top represents the income, the double line at the bottom represents the ordinary expenditure. At one or two places there have been items of extraordinary expenditure, which are plotted more lightly—for instance, the legal expenses connected with various Acts of Parliament. Roughly speaking, up to three years ago there was always a surplus, varying from £1,500 to £1,800 per annum; practically the amount of the examination fees received from the Students could be put into the bank year by year. And eventually we were able to go a long way towards the purchase of these premises, largely through that examination income which was coming in steadily and which was increasing with the reputation of the Institute. The number of Students also was steadily increasing up to the period when, for some reason or other, it was decided to revise the Charter and introduce another class by non-examination. Instantly the effect was felt on the income. That upper dotted line should have been followed and led us now to somewhere over £13,000, but it has immediately dropped; and the examination fees in one year, 1908-9, dropped from £1,766 to £1,358—a very serious drop indeed. It must be remembered that the additional income from the new class, which started when we were lowest, has not by any means reached the figure it would otherwise have reached; it is more than £1,500 less than we should have had if the ordinary average had continued. That is very important to remember. Let us turn to the other side. Last year we had the purchase of the new premises, and that involved the selling of our investments. We lost straight away an income of £800 a year from our various investments, so that in forming a comparison of the ordinary income we must exclude the Licentiates' subscriptions. The income from 1903 was rising steadily without sign of giving way, but when the Revision of the Charter came it dropped immediately, and when it was settled it dropped again. There was a slight reaction afterwards, and we came to the question of disposing of our shares, and then again our income dropped down £800 or so. There is no saying where it will go next year. If you turn to the expenditure in the diagram —I mean ordinary expenditure—you see it is an absolutely steady line; the line is rather under than over the parallel; that is to say, the surplus was increasing; the whole of that space between the dotted lines would have been surplus, namely, £2,500. I think everyone will bear with me that that is so. The expenditure in 1909 went up owing to legal expenses; but on the top of that came all this additional expenditure. I am ignoring for the moment the expenditure on the Town Planning Conference—I shall ask you to give us full details of that enormous expenditure, for I think every member is entitled to know the details of the way in which that huge amount has been piled up—I want to deal simply with our ordinary expenditure. With the addition of a larger number of members naturally the running expenses of the Institute went up, although the receipts went down. A large portion of it is due to the rent. That will be reduced somewhat when—and if—the Architectural Union Company declare a dividend. But in the ordinary course it cannot go down much below this line. The lower dotted line shows what the ordinary expenditure would have been *plus* additional expenditure due to increased staff and, of course, increased cost of the upkeep of the premises. The Licentiate class will close shortly, and the "income" line from that source cannot go up; it must follow the fortunes of the other line below. It seems to me we are getting into a very parlous condition indeed, and no one can prophesy what is going to happen next.

The PRESIDENT: The estimated balance of income over expenditure is £1,000, yet according to your diagram our expenditure is greater than our income.

Mr. DAVIDGE: The Auditors themselves, from the tone of their Report, realise the serious condition of affairs, and every member of the Institute must also realise that we are in a very dangerous position indeed. The ship we are in is a very fine ship, but we are driving full speed ahead to somewhere we do not know. I am on the fo'castle as a simple "look-out" man, and I see some danger ahead. The Auditors and you, Mr. President, are on the bridge, and you can do what you please with my warning. We have to reconsider our

financial position very seriously. In Mr. Woodward's interesting statement as to the number of members he omitted, and perhaps for very good reason, to point to the number of Students. And it is very strange that if you turn to the last three Annual Reports you will not find in any of them mention of the number of Students, and for obvious reasons. In the last published numbers, in 1908, there were 961 Students on the roll. Since then there has been a steady drop to the present number, 377. What does that mean? It registered as Students during the three preceding years. Notification of this fact will be found in the KALENDAR at the head of the Register of Students, p. 300. The 377 names Mr. Davidge referred to represent only the number of Students who have qualified for the Register from November 1908 to June 1911.

Mr. DAVIDGE: I can leave the matter there with the President. But we must have an account of this huge pile on the top of our heavy expenses. We must know



MR. DAVIDGE'S DIAGRAM (*p.* 522).

means that for the future the examination fees, from that class at any rate, will be very much in jeopardy.

The SECRETARY explained that up to three years ago it had been the practice to print in the KALENDAR the names of all those who had qualified as Students since the Register was started in 1890. But this had reached a very deceptive figure, as it evidently included a very large number who had no intention of going on with the examinations and presenting themselves for the Final. The Council therefore decided to publish in the KALENDAR the names only of those who had been

where that £2,300 for town planning has gone to. And I would point out that we have had Conferences before which did not cost anything like this. The Council in this case voted £500 for the Conference; it was, no doubt, very kind of them, but we as members have something to say to it when our property has to be disposed of for purposes like that. I am at one about town planning, but I am against the finance which allows expenditure to be piled up without a word from the general body. The Auditors' Report says that an overdraft was obtained for the purpose of paying ex-

penses in connection with alterations and for the Town Planning Conference. You will find that the resolution authorising that overdraft (JOURNAL, Vol. XVIII., p. 356) said nothing about the Town Planning Conference. We should have been outside our province to get any such overdraft. The serious point is that the overdraft is £9,000, whereas the express resolution of this General Meeting was that the overdraft should not exceed £7,000. I will not ask for an explanation now; but it will have to come. There are one or two other points of very great interest. In last year's estimate we were expecting an income from the Architectural Union Company of £930. That has not been declared, although the accounts say we have spent £1,740 on rent to the Company. But, thanks to the courtesy of Mr. Tayler, I understand to-night that we have not spent £1,740, that the account is less than that, and that the £1,543 which the Auditors refer to as still outstanding is part of that £1,740. That is reassuring, but I think these statements should be made perfectly clear. The £1,740 has not all been spent, and these sundry creditors include the large item of £1,543. If there is an item of £1,543 which can be put down as sundries, we have a right, as the General Body, to know what the sundries mean without the Auditors having to point it out. There is another point with regard to the Trust Funds, which I need only mention, and that is that the Jarvis Fund should be mentioned in the account, although the Institute has no control over the fund. And there was a sum of £500 left by Mr. Colls which has apparently been transferred to the Benevolent Society.

The PRESIDENT: The Colls Fund of £500 was not left to the Institute. It was bequeathed to the President of the Institute for the time being, and was to be applied at his discretion—at his "absolute discretion," to quote the terms of the bequest—either for educational purposes or for the purposes of the Architects' Benevolent Society. It was a difficult thing to decide, and I took the Vice-Presidents into consultation in the matter. After long and careful consideration we decided—and perhaps I took the principal part in the decision—to devote the money to educational purposes, and it has been placed at the disposal of the Architectural Association to be used for the purposes of architectural education.

Mr. HERBERT SHEPHERD [*A.*]: There is no allusion to the Colls Fund in the Report. It was promised at the last Annual General Meeting. I asked about it, and the Chairman of the meeting said that it came in too late, and that it would be dealt with in the next Annual Report.

Mr. DAVIDGE: I have nothing to say about the President's decision; I am sure it is a wise one. But in common fairness we ought to have these things before us. We have every trust in you, Sir, and in the Council; but there must be nothing kept in the dark. If everything is brought clearly before us, you will have our wholehearted support. But when we go full speed ahead in the darkness we ask you to switch the searchlight on and let us see in what direction we are going.

The PRESIDENT: How it happened that it has not been announced I am afraid I do not know. We have a great deal to do at the Institute, and if it was not announced it was because of an oversight, not from any intention of keeping the matter in the dark. It was announced to the Association that it had been received.

Mr. DAVIDGE: Will you put it into the Report?

The PRESIDENT: Yes, if you wish.*

* A paragraph dealing with this matter has been inserted in the Report, see p. 467.

Mr. DAVIDGE: Now we have got so far, we can consider in what direction we are going, and I can leave it to the meeting, specially emphasising those two or three points, that the Students are rapidly decreasing, the general income decreasing, and our expenditure rapidly increasing. As to the methods of dealing with the situation, that is another matter, and I suggest that a special Finance Committee should be elected by this Institute. At present, presumably, they are appointed by the Institute Council. They should at any rate report to us, as well as the Auditors. The finances, after all, are the pulse of the Institute, and unless that is healthy, everything else will fail. What we insist upon is, that the finances must be kept under careful control, that we should have capable men in charge of them, and that they should lay the whole facts before us.

Mr. PERKS: Should I be in order in moving that a Finance Committee be elected in the same way as the Standing Committees?

The PRESIDENT: I do not think you would be in order. The management of the funds of the Institute is one of the matters for which the Council is responsible under the Charter. The Finance Committee is a Committee of the Council; they meet very frequently, and are always keeping us in check.

The SECRETARY read Clause 16 of the Charter, dealing with the management of income.

Mr. PERKS: I should like to call attention to one matter only in this Report. It is on page 45, in the paragraph relating to the new London bridges. I should like to add to that paragraph, after Dr. Burnet's name, the following words: "with the result that the original scheme of the Corporation of London, which was opposed by your Council, was sanctioned by Parliament." As it stands at present the story is only half told. With regard to St. Paul's Bridge it is all over and settled now, and we have nothing to do with the merits of the case. But it is the fact that this Institute, through its Council, took a very prominent part in opposing the Bill of the Corporation of London. It presented a strongly-worded petition to Parliament against the scheme as one which was not satisfactory. The Bill was referred back because Parliament were led to believe that it was a bad scheme and that no architects had reported upon it. The Corporation then submitted their scheme to three eminent architects, who reported unanimously in its favour. The result was that the Bill went back to Parliament, and was carried by a large majority.

The PRESIDENT explained that the Council endeavoured from the first to induce the Corporation to take the best possible architectural advice before deciding upon their scheme. This was really all that was asked for, and as soon as the three eminent architects were appointed the Council were perfectly satisfied to leave the matter in their hands.

Mr. PERKS, continuing, read extracts from the Institute petition and from a letter of the President's in *The Times* condemning the Corporation's proposals, and went on to criticise the inaction of the Council in not attending before the Committee of the House of Commons and giving evidence against the scheme.

Mr. J. DOUGLASS MATHEWS [*F.*] expressed his great regret at the course taken by the Council. At his own instigation, he said, as a member of the Bridge House Estates Committee, some three years ago, when the scheme was quite in its initial stage, the Committee had consented to receive a deputation from the Institute on the question. The deputation, consisting of architects, painters, and sculptors—all of them professional members or Honorary Associates of the Institute—attended, and were informed that so far nothing had been done as regards the selec-

tion of an architect, but that an engineer had been employed to plan the general route, and his scheme had been approved. The Committee assured the deputation that before anything of an architectural character was decided upon, the Institute should be consulted. Then began this unfortunate opposition, which had had the effect of alienating their friends on the Committee. He was very sorry for it, because there was no desire on the part of the Corporation to do anything but what was perfectly right. Mr. Mathews concluded by expressing the hope that the paragraph would be eliminated entirely from the Report, especially as the Committee had again reported to the House of Commons in favour of the Bill, which was carried by a large majority. Failing that, he should propose that the words suggested by Mr. Perks be added.

Mr. PERKS repeating his proposition to add the words above reported, Mr. DOUGLASS MATHEWS said he should prefer that the entire paragraph be omitted.

Mr. WOODWARD, Mr. BRODIE, and Mr. MAURICE B. ADAMS deprecated further discussion on the point, and in the end, the President deciding that no definite proposition was before the meeting, the matter dropped.

Mr. BRODIE referred to the terrible event in the Atlantic, and expressed the pleasure they all felt at seeing the President back again in the Chair after his recent long journey. Adverting to the proposals during the past year for further extending the Charter and By-laws, he said that such changes involved the expenditure of a great deal of money, and the Institute was not in a position at the moment to bear such expense. Further, the Associates were agitating for additional representation on the Council, and this would mean an alteration of the By-laws, and possibly of the Charter as well. Then, again, the Licentiates were suggesting that they also should be represented on the governing body, although they were only a passing class and would come to an end in a few years. The Institute wanted members, not Licentiates, and the latter had no title to be represented on the Council. He entirely disagreed with this idea of further representation of Associates and Licentiates on the Council. It was a misdescription. The Council represented the Institute; the Council were elected by the votes of the Associates as well as of the Fellows, and he ventured to think that the votes of the Associates far outnumbered those of the Fellows at those elections. Therefore, if figures went for anything, the Fellows sitting on the Council represented the Associates more than the Fellows. It would be wise, he thought, for a year or two to report how many Fellows and how many Associates respectively voted at the annual elections. This could easily be done, as different envelopes were used for the various classes of voters. He was sure it would be found that many more Associates voted than Fellows.

Mr. HAMPDEN W. PRATT [*F.*] said that it might be gathered from the reference to the London Master Builders' Association and the Sub-Contractors' Agreement on page 53 that there was no agreement actually in existence. But that contract was printed in the Master Builders' Handbook, and to his knowledge was used now. With regard to the donations of books, he asked if new members on joining the Institute were now requested, as used to be the case, to make a donation to the Institute. Looking at the number of donations to the Library, it did not seem that much was obtained from that source. Referring to the accounts, he asked what the item "Contributions to Allied Societies" meant.

The SECRETARY: The subscriptions of members of Allied Societies are credited in full, and we remit one-fourth under By-law 82.

Mr. PRATT: With regard to the omission from the Report of the number of Students, could not the explanation which has been given to us by the Secretary be embodied in the Report? As it has been usual to publish the numbers, it would be better to explain why it has been dropped.

Mr. ALAN E. MUNBY [*A.*]: It seems to me that all this heavy expenditure is being crammed into a short space of time, and I think coming generations might be expected to bear some part of it. I hope the Institute will not allow itself to suffer from panic legislation in the matter of the restriction of funds. Speaking for the Science Committee, we are asking the Council to help us in one or two schemes which have been placed before them and which we hope will be considered in regard to finance. I should be very sorry if, on account of a sudden increase of expenditure, which might be spread over a term of years, we were denied grants from sources which in the ordinary way might have been tapped.

Mr. H. A. SATCHELL [*F.*]: As one of those responsible for drawing up the Report of the Practice Committee, may I say that Mr. Pratt is correct in saying that the paragraph concerning an agreement used by the Master Builders' Association is not quite accurate. They have a form of agreement, but it is not satisfactory, and they are trying to improve it, just as the Institute is trying to improve its Conditions of Contract. We might say "a standard form" or "a *new* form of agreement."

The correction was agreed to.

Mr. G. ERNEST NIELD [*F.*]: I notice in the Report that the Council are dealing with the matters of professional conduct and professional charges. There are a large number of house agents who are doing architects' work, and I think this is a matter which should be gone into fully by the Institute. In my own practice I have met with more than one house agent who, thoroughly incompetent to do the work, has handed it over to a builder, whose crude efforts must, in the end, disgust the public. The agent in these cases can afford to take any fee: for if he eventually gets none at all he is not out of pocket, having done no work; this leads the client to expect no fee if he abandons his project. It seems to me that registration is the only safeguard left to us; and the notice given of it in the Report is not so satisfactory as one would expect. We know that the scheme of combining the Society of Architects and the Institute is practically dead, but nothing definite is said as to what is being done about registration. I think the three—professional conduct, professional charges, and registration—ought to be considered together.

Mr. EDWARD GREENOP [*A.*]: With reference to this £1,700, may I ask whether the Council were from time to time informed by the Executive Committee of the Town Planning Conference that the £500 voted was being exceeded, and whether the Council sanctioned the excess expenditure; or whether the matter was allowed to drift until the Council was informed that £1,700 had been spent? At the International Congress of 1906 we actually made a profit of nearly £60, according to the balance-sheet published in the *Transactions* of the Congress. That Congress was a very successful gathering. We had many distinguished visitors from all parts of the civilised world, and we treated them very handsomely. We made nearly £60 profit, part of which went to the Architects' Benevolent Society. Compare the finances of that Congress with those of the recent Town Planning Conference. There has been apparently some want of consideration in this matter. I think it would be well if we had a rule here, as they have in some other bodies, that no extra expenditure exceeding a certain moderate amount should be incurred without the general body first being informed and their sanction obtained to such expenditure. This would relieve the Council of a great re-

sponsibility, and put the responsibility on the shoulders of the general body.

The PRESIDENT: But you would get nothing done.

Mr. GREENOP: We should not want the Council to come to us for anything, say, up to £100, but if they are to have unlimited scope in extraordinary expenditure, we may be placed again in the same position as now.

The PRESIDENT: According to the Charter, the Council have the sole management of the funds of the Institute. If you want to take this out of their hands the Charter will have to be altered. I do not think it workable.

Mr. DAVIDGE: We seem to have borrowed money for the Town Planning Conference, and to have disposed of part of our income and investments for this purpose without the vote of the general body. It is irregular, and the Secretary, I think, will bear that out.

Mr. GREENOP: There is another point. I notice there is attached to this Report a little slip about the President's portrait. There is also an item in the accounts of £58 14*s.* for the last President's portrait. It is an open secret that voluntary subscriptions towards the portrait necessitate the payment of a certain sum by the Institute every two years to make up the balance. I think that is a little unfortunate. There is no doubt we ought all to subscribe to this fund and render such a course unnecessary. But we do not, and I have to confess that I am one of the mean persons who do not. I think the time has come when the Institute funds could very well bear that expense, and then we should not have to go through this undignified course. We might have a recognised sum, and then we should get a greater equality of merit in the portraits, which is very desirable. If the Council would bring that matter forward perhaps members would support it. We shall not, I hope, always be in this state of poverty. One great point which had been advanced for the Town Planning Conference was that we had had "a week in the sun." A week in the sun is very nice, but if you have to shiver in the cold and shade, in starvation and poverty, for two years to pay for it, it is dearly bought.

Mr. SHEPHERD: May I refer to one point with regard to the accounts on page 56, where we are taking into consideration the assets of the Institute. Under the heading of Investments there is an item "at cost: 1,037 shares Architectural Union Company, £15,251." But as a matter of fact to acquire those shares the Institute had to pay in hard cash the sum of something like £1,350, and that £1,350 is actually included in the next item "as per last balance-sheet, £19,216." I suggest that that item of £1,350, which was the cost to the Institute of getting the Architectural Union Shares, should be distinctly stated as a portion of the cost. I think it was impossible to have bought out the interests in a better or more advantageous way. But the figures should have been separated last year, and I still think it should be shown here, because otherwise we do not realise that those shares cost us £1,350 more. I suggest to the Council that a better way to lay this financial statement before members would be to put it in the form of a profit and loss account. You have the Library shown, and the JOURNAL, and all sorts of items, and unless you show these things separately you do not see where you are standing in regard to profit or loss on the item. With regard to the Town Planning Conference, I do not know whether the Hon. Auditors could tell me what I want to ask. It was stated last year that the estimated value of the sale of publications was £105, reducing the actual cost to the Institute of the Town Planning Conference to a balance of £1,395. As a matter of fact, that is the figure given, but it is more than that. The cost was put down last year at £1,500.

The SECRETARY: That was the balance unpaid. The estimated extraordinary expenditure on the Town Planning Conference to be paid in the year 1911 was £1,500. There has to be added to that the £560 which figured in the expenditure account for 1910. This brings up the total estimated cost to £2,060.

Mr. SHEPHERD: How much did the sale of the publications on the Town Planning Conference gain us in the year 1911?

The SECRETARY: The sale of the volume of *Transactions* brought us in £287 7*s.*

Mr. SHEPHERD: We seem to be overdone with "rough" estimates. It is not the Auditors but the Council who submit estimates, and it is only in the last two years that we have had to put up with "rough" ones. I think this is objectionable. We ought to know pretty well where we stand, and it is desirable we should have more light on the subject. On the Town Planning Conference you have £1,395 as an estimated deficit last year, after the whole thing was closed, and yet this year you show an expenditure of £1,675.

The SECRETARY: The accounts were by no means closed when last year's estimate was prepared. To mention one item alone—the *Transactions* of the Conference. The work was still in the press, and all the accounts for printing, illustrations, binding, and distribution had to come in. In the end, the estimate appears to have been exceeded by about £175.

Mr. PERCY B. TUBBS [*F.*]: What does the JOURNAL and the KALENDAR cost the Institute after deducting the amount received for advertisements?

The SECRETARY: After deducting the amounts received for advertisements and sales the cost to the Institute is about £1,350.

Mr. TUBBS: The sales of the JOURNAL and KALENDAR are mixed up with the other publications, and it is not clear how much should be credited to each. When does the advertising contract expire?

The SECRETARY: In about five years.

Mr. ELKINGTON: There is an item under the head of Extraordinary Expenditure, "Expenses *re* Licentiates' Class, £40 9*s.* 2*d.*"; what were these expenses?

The SECRETARY: Expenses of meetings held throughout the country, issuing circulars, advertising, etc.

Mr. ELKINGTON: In the Report it says there are 1,834 Licentiates who have been elected. In the accounts it says 1,638 Licentiates paid a guinea, and there is one, apparently, who is in arrear.

The SECRETARY: That was last year. The subscriptions of those elected since January would not appear in this financial statement, which is for the year 1911.

The PRESIDENT, replying to some of the points raised during the discussion, said: It is a little difficult to explain the excessive expenditure on the Conference. No one anticipated it was going to cost as much as it did. The Exhibition was an especially heavy item, and grew to be a much bigger affair than was at first intended. But everyone will admit that it turned out to be a very fine Exhibition. The Conference, too, was a very great success—and to make it a success it had to be well done. If we had to do it over again no doubt we should be able to do it more economically. It came upon us with a rush, and though it was done largely by voluntary help, yet the expenses mounted up; I am afraid that until the end no one knew exactly what it had cost. Architects perhaps will appreciate the position better than anybody. There are still some receipts to come in from the sale of publications. I think that is all I can tell you about the Town Planning Conference. I may add that these accounts have all been very carefully audited.

Mr. DAVIDGE: Was there a rough estimate prepared

before the Town Planning Conference in fixing subscriptions?

The PRESIDENT: Yes, there was an estimate, which turned out to be, like many architects' estimates, rather unreliable. But I think the profession has got by the Conference more than full value for its money. If it had not been for the fact that we were buying Union Company's shares, and selling stock at a loss, we should never have heard anything about this deficit. But now we are faced with this diagram, which does not give a correct picture of our financial position, though Mr. Davidge has brought it before us with the best intentions. We are now housed in premises which are practically our own freehold, and are worth £40,000 or £50,000, and the only charge on them is the £9,000 overdraft at the bank and £4,000 mortgage, making a debt of £13,000, which we shall pay off by degrees. Instead of putting our savings to a reserve account to provide for a building fund, as we have done in past years, we shall have in the future an annual surplus towards paying off the debt. As regards donations to the Library, there used to be a custom for new members to read either a paper or to give books to the Library, but the practice was dropped many years ago.

Mr. DAVIDGE: There is the point about the authority for the overdraft.

The PRESIDENT: I do not think anyone can be blamed for that. There was an overdraft of £7,000 for the premises authorised some eighteen months ago. This £7,000 was to meet a specified debt which had been incurred in altering the premises. And we had other expenses in connection with the Town Planning Conference which had not been foreseen.

Mr. DAVIDGE: Had the Council authority to get the overdraft?

The PRESIDENT: The Council had authority from the General Body.

Mr. SHEPHERD: The Council had authority to get an overdraft of £7,000, and immediately afterwards they obtained a loan from the bankers of £2,000. With all respect to our Auditors, to call that sum an overdraft of £9,000 is a mistake. It should have been an overdraft of £7,000 and a loan from the bankers of £2,000.

Mr. ELKINGTON: It is a dangerous precedent, and I do not see how you can reconcile it with the limited overdraft sanctioned by the General Body.

The SECRETARY: Under the Charter and By-laws, as I understand them, it was not necessary to come to the General Body for permission to overdraw our account, but it was necessary to get the sanction of the General Body to charge the property of the Institute and deposit the shares and leases as security.

Mr. JOHN HUDSON [*F.*], *Hon. Auditor*: Mr. Davidge drew attention to the words in the Auditors' Report "excess to be applied steadily to the reduction of the loan from the bank which was negotiated in 1911." I think you should insert the word "and" after 1911, so that it should run "*and* for the purpose of paying."

The further proceedings at the meeting are recorded in the Minutes published in the last issue.

Books received.

The Principles of Structural Mechanics: treated without the use of Higher Mathematics, by Percy J. Waldram, Lecturer on Structural Mechanics, Central School of Arts & Crafts. 8o. Lond. 1912. 7*s.* 6*d.* net. [B. T. Batsford.]

Modern Practical Design, by G. Wooliscroft Rhead, R.E. 8o. Lond. 1912. 7*s.* 6*d.* net. [B. T. Batsford.]

Modern Cottage Architecture, by Maurice B. Adams. 2nd ed. 4o. Lond. 1912. 10*s.* net. [B. T. Batsford.]

A Second Series of over Sixty Designs for Family Homes, by Fifty Architects. 4o. Lond. 1912. 1*s.* net. [William J. Baker, 57 Carey Street, Lincoln's Inn.]

Mr. Cram's Paper.

Among the guests of the Council Dinner Club on the occasion of Mr. Cram's Paper were the American Ambassador (the Hon. Whitelaw Reid), the Earl of Plymouth, Sir Alfred Keogh, K.C.B. (Rector of the Imperial College), Sir Edward Busk (Chairman of Convocation, London University), Mr. Edward Warren, F.S.A. [*F.*], Mr. G. Gilbert Scott (architect of Liverpool Cathedral), and Mr. Cecil Brewer [*F.*]. All the guests were present afterwards at the reading of the Paper. Mr. Cram had crossed the Atlantic specially for his Paper, and was able to stay here but a few days—arriving on Saturday the 18th and starting for the return journey the following Wednesday morning. His audience at the Institute was a full and very appreciative one. The Paper, with the descriptions of the illustrative lantern slides, occupied over an hour and a half in delivery, but the author held the interest of his audience throughout and was enthusiastically applauded at the close. The *Architects' and Builders' Journal* describes it as "in a literary sense one of the finest Papers ever read at the Institute not only in its substance but in the admirable manner of its delivery." Besides the lantern illustrations Mr. Cram had brought over a large collection of drawings and photographs representative of the works of the various architects referred to in the Paper. These were hung in the West Gallery and are to remain on view till the 1st June.

London Street Name-plates.

Reference was made in the Annual Report of the Art Standing Committee [JOURNAL, p. 471] to the arrangements in progress at the Institute for holding a conference with representatives of the civic authorities of London to discuss the subject of the uniform treatment of street name-plates in London. The conference took place on the 22nd inst., Mr. Ernest Newton, A.R.A., in the Chair, and was attended by members of the Art Standing Committee and by representatives of most of the borough Councils of London. There was a free interchange of views among those present, and it was generally agreed that some uniformity of treatment is desirable. Some of the London street name-plates are cast iron, many are enamelled iron, others are of zinc or tile; but the most common system of all, and the most objectionable in the view of the Art Committee, is to paint the name of the street on the bricks of the house. The type of plate most generally favoured was one of plain cast-iron, with raised letters in old Roman type. The suggestion was also made, and met with considerable approval, that a competition should be promoted for a design for a good, efficient name-plate for uniform use. Neither of these two proposals was definitely adopted, but the representatives of the municipalities agreed to report to their councils and to meet the Institute again. Needless to say, the Art Committee do not advocate an

ornate or elaborate name-plate ; their view is that if it is simple and thoroughly efficient for its purpose it will be sufficiently artistic.

Town Planning : Proposed Chair at London University.

A proposal has been made, and is now receiving influential support, for the establishment of a professorship of town planning at London University. The idea originated with Mr. John Burns, who suggested at the Town Planning Exhibition, held at Crosby Hall some time ago, that some wealthy person should endow such a chair ; and since then Mr. Herbert Warren, of the Garden City Association, has several times urged its desirability. The matter was at first referred to the executive committee of the Association, and now a strong committee is being formed to further it. It is intended, if the proposed Chair is founded, that architectural students should have the opportunity of attending the lectures on town planning as part of their professional studies. Instruction is already given in this subject at Liverpool University by Professor Adshead and at Birmingham by Mr. Raymond Unwin, and it is strongly felt that students in London should have the same facilities. Sir Philip Magnus, M.P. for London University, Sir William Collins, and Sir Henry Miers, the principal, have expressed great interest in the scheme. It is supported also by Sir Aston Webb, R.A., and Mr. John Burns has offered several valuable suggestions. The promoters consider that a professorship at London University should have an endowment of £600 a year, and a lectureship £300. The progress of the scheme will depend on the success in raising funds, and pending the formation of the committee any suggestions or offers of assistance will be welcomed by the Secretary, Garden City Association, 3 Gray's Inn Place, W.C.

The London Society : Appointment of the Council : Paper by Mr. Raffles Davison.

The London Society, whose aim is to make London a perfect and beautiful city by the concentration and unification of existing forces, and to engender a true civic pride in its citizens, held its inaugural meeting on the 23rd inst. in the Galleries of the Royal Society of British Artists, Suffolk Street. The Earl of Plymouth presided, and at the opening of the proceedings the Hon. Secretary, Mr. H. J. Leaning, announced that the following had been appointed members of the Council : Sir George Alexander, Sir J. Wolfe Barry [*F.*], Sir Thomas Brock, R.A. [*H.A.*], Mr. Reginald Blomfield, A.R.A. [*F.*], Mr. W. D. Caröe [*H.A.*], Mr. J. M. Dent, Sir Alfred East, R.A. [*H.A.*], Sir Douglas Fox, Mr. Thomas Gautrey, Mr. C. H. St. John Hornby, Sir J. Prichard Jones, Mr. Philip Norman, Sir E. J. Poynter [*H.F.*], Sir Aston Webb, C.B., C.V.O., R.A. [*F.*] ; representing the Royal Academy, Sir Frank Short, R.A. ; representing the Royal Institute of British Architects, Mr. Leonard Stokes, P.R.I.B.A. ; representing the Royal Society of Sculptors, Sir George Frampton, R.A. [*H.A.*], and representing the Mansion House Council on Health and Housing, Mr. C. J. Allan.

The Earl of Plymouth said that some persons might be inclined to think that the London Society had taken upon itself the task of guidance or interference with the authorities who rightly controlled the London buildings and improvements. He wished emphatically to state that that was not the promoters' intention. But as they believed that all good citizens should take an intelligent interest in the growth and changing developments of the capital of their country, so did they wish to stimulate and to focus that interest, to give the public some guidance, and to help them to exercise that legitimate influence that they ought to exercise upon the mark which our own generation was leaving upon the planning and the stones of the Metropolis. They knew how, in days gone by, in the small community of Florence, the citizens used to assemble together in their chief square and approve or disapprove, by show of hands or by some such simple method, the design of the proposed buildings of their city. They could do that because their eyes had been trained to a sense of beauty from childhood, and all the inhabitants who took the trouble to examine and discuss the designs were competent to express an opinion. Of course, under present conditions, such a thing was impossible, but none the less it was useful and right that there should exist an organisation from which an expression of general artistic opinion could proceed with some weight and authority behind it. One other object might usefully be borne in mind. The guardians of public money, be that money derived from taxes or from rates, must hesitate to recommend large public expenditure if they were not assured of public approval and support. Such a Society as theirs might help to form public opinion, and might render great service to those who would willingly take the right course and initiate some splendid improvement if they were certain of such general support voiced by such a Society.

Mr. T. Raffles Davison [*H.A.*] read a Paper, illustrated by lantern views, on "London as it is and as it might be.* Sketching the main lines of the future work of the Society, Mr. Davison said :—

In the forefront of everything is the encouragement of all schemes which will tend to make London a fine city as to health, beauty, and general amenity, and to stimulate the imagination of all its citizens as to the possibilities of its future. As a means to this, several specific lines of action are suggested :—

1. To advocate the establishment of a central authority which may ensure the continuance of a wise and far-seeing control over both the practical and artistic development of the city.

2. To advocate reform in the Building Acts, which will compel a proper consideration as between heights

* The Paper may be read *in extenso* in the current issue of the *British Architect*.

and widths of streets, and as to materials used. In foreign cities the question is much more considered, with happy results, so that the maximum of sunshine is secured in the street and in the home.

3. To obtain some better guiding rules as to building lines, and to watch their development, so that better architectural and economic results may be obtained.

4. To guard the amenities of our noble river and save it from degradation. There seems a grave risk at this moment that its fine northern embankment may be ruined by a seven-story hotel, built about one hundred yards in advance of the general line of frontage.

5. To secure the consideration of the artistic point of view in all works of borough or county councils, by means of an advisory art committee.

6. To work for a better and more adequately distributed park system, with a view to provision of future extension. And also to do all that is possible for the increase and extension of open spaces.

7. To secure the better opening up of good public buildings.

8. To insist on the completion of improvements and to oppose measures which prevent it.

9. To do all that is possible towards the co-ordination of all schemes and plans, which will gradually lead to the best general plan scheme for the whole city.

10. To endeavour to bring into a better method of order, decency, and design, all the various objects which are placed in the streets and open spaces, such as street lights, conveniences, shelters, kiosks, statues, &c. This might be defined as a sort of tidying-up process.

Anomalies such as never could exist except in this country may be named as follows :—

1. Local bodies with a right to veto any general scheme for London, which, however good as a whole, may be thought to damage small local interests.

2. The main body so absorbed in its manifold duties of the present that it has no time to stop and consider the future, with the result that until two years ago (with the exception of two imperative schemes, viz. Kingsway and Millbank) very little heed has been given to the future needs of London, or to the lines upon which it should develop.

3. Such improvements as are made are done for strictly utilitarian reasons in a strictly utilitarian way after great pressure.

4. Improvements which, by not being sufficiently comprehensive to include properties affected, as well as those contiguous to a new street, leave un-lettable patches and ugly fringes of old buildings, which remain for sometimes 50 years as left.

5. Railways, not only originally allowed to devastate large tracts of central areas with their viaducts and yards, and stations, but also to neglect them deplorably, and increase their original ugliness.

6. Huge areas of slum property, which cannot be dealt with publicly, owing to exemption of such areas from the Town Planning Act and the failure of the Housing Acts. Nor privately owing to the obstinacy of fossilised owners who refuse to co-operate with those adjoining who may be willing to rebuild.

7. Untold waste of fine sites through bad access, etc., owing to want of co-operation between owners and authorities, resulting in the perpetuation of such districts as Soho and Covent Garden, hard by the most important and wealthy streets in London.

8. Great public buildings, such as the Central Criminal Court, the British Museum, the Institute of Chartered Accountants, the Wesleyan Hall, and the Westminster Cathedral, hidden away in narrow streets, and lost to public view.

9. The smoke question lost, and only half administered, in a tangle of vested manufacturing interests.

10. Advertisements scattered wildly anywhere, without reference to the interests of adjoining or opposite owners or public, because the Act regulating them is adoptive and not compulsory.

11. Narrow and unhealthy streets, made even more unhealthy by the power given to owners to erect high buildings in them, regardless of the width.

12. Perpetuation of bad alignments and projections in streets, because owners have power to do so, and it is no one's business to suggest public action to prevent it.

13. Buildings erected of the most fantastic design—most incongruous with their surroundings, and of materials of most vivid colours and unsuitable texture.

14. Costly new buildings rising where manifestly improvements will rapidly necessitate removal.

15. Parks in excess of requirements in some places, and entirely absent in others.

16. Both parks and squares closely barricading and obscuring the view, obstructing passage, and destroying all sense of freedom and space.

17. Streets obscured by permanent erections above and below ground, such as conveniences, kiosks, orderly boxes, cab shelters, ambulance sheds, and refuges, usually in the worst possible taste—cite Waterloo Bridge lamps.

18. Tree planting on a miniature scale, and even then usually without reference to surroundings—*vide* Hyde Park Corner.

19. The invasion of residential districts by manufacturing and commercial buildings, and *vice versa*, and an entire absence of any attempt at civic administrative or educational concentration.

20. And, lastly, a chaotic system of goods collection and delivery, whereby enormous waste is caused both in time and in the space occupied for goods yards.

As a mere business venture, said Mr. Davison, we should be ashamed to run London as it is now —a mass of complicated and conflicting organisations, a surging sea of struggling forces, pulling in all directions without firm, conclusive, and statesmanlike control. It is not economically sound as a matter of business, it is not decently attractive as a world show. We are a wealthy city, and are said to have spent twelve millions in sixteen years in public improvements. But the French spent fifty-three millions on Paris, and have earmarked thirty millions more. In 1907, tourists and travellers alone spent 120 millions in France in hotels, transportation, purchases, and amusements. What is fifty millions of capital to that? What proportion does our outlay bear to our vast size and great income? "As a great and noble embodiment of civic life, as the capital city of a vast Empire, London cannot stand comparison with many small cities of the world. The necessary sentiment is lacking. Can it be aroused? A distinguished writer said the other day: 'Everything noble, beautiful, and splendid that has ever been written, sung, painted, or done since the world began, has been born in sentiment, carried through by sentiment, and remembered by sentiment.' Shall that sentiment which ennobles, idealises, and inspires be lacking in the great and immediate necessities for the improvement and beautification of London?"

The Chair of Architecture, Manchester University.

Applications are invited for appointment to the Chair of Architecture at Manchester University, vacant through the resignation of Professor S. H. Capper [*see* p. 491]. The salary is £600 per annum. Particulars as to duties and conditions and forms of application may be obtained from the Registrar of the University on receipt of a stamped addressed foolscap envelope. Applications must be sent in not later than Tuesday, 18th June.

International Building Exhibition, Leipzig, 1913.

Particulars are to hand of the International Building Exhibition to be held from May to October next year at Leipzig under the patronage of the King of Saxony. The primary object of this the first International Exhibition devoted to building in all its branches, and especially dwelling-houses, is to demonstrate the progress which the art of building has made in the last twenty or thirty years. The exhibits will be arranged in sections as follows :

I. Architecture (8 groups).—(1) Town Building and Settlements; (2) Engineering Building Works; (3) Architectural Building Works; (4) The Art of Decorating and Furnishing Interiors; (5) Architectural Painting and Sculpture; (6) Gardens and Parks; (7) Cemeteries—Monumental Sculpture; (8) Monuments—The Care of Monuments—Home Preservation.

II. The Literature of Architecture and Building—Technical Educational Institutions—Office Requisites for Architects and Engineers.

III. Building Materials, their Manufacture or Preparation and Use (20 groups).

IV. Machines, Tools, and Apparatus used in Building (5 groups).

V. Sale and Purchase of Building Land; Building Finance; Estate Agencies; Insurances in connection with Dwelling Houses; Book-keeping for Builders and Architects (5 groups).

VI. Building Sanitation for Dwellings, Factories, and Streets; Protection of Workers from Injury, First Aid and other Provisions for their health and comfort; Precautions against Fire; Old Age and Invalid Insurance (6 groups).

VII. Gymnastics, Games and Sports.

VIII. Testing of Building Materials; Technical Demonstrations.

Applications for space, with detailed descriptions and sketches, must be sent to the offices of the Directorate, Windmühlenweg No. 1, Leipzig, on or before 1st October 1912.

St. Nicholas Priory, Exeter.

Some time back, the Governors of the Royal Albert Memorial, Exeter, referred to the Museum, Library, and Fine Arts Committee for their consideration the desirability of acquiring some ancient building of architectural interest to serve for the purpose of a local historical museum. In the course of their inquiries the Committee have ascertained that the ancient building of St. Nicholas Priory could probably be purchased for the city. This property, which the owners are prepared to sell, comprises some buildings in the Mint, Exeter; and what is generally regarded as the remains of the old Benedictine monastery comprise the central portions of this block, portions of the ruins extending throughout the whole of the property. The owners are prepared to accept £850 and their costs of the purchase from the Council, and the Committee are of opinion that, quite apart from the question of establishing a local history museum, a building of this great historical and antiquarian interest should be purchased for the city and a suitable restoration effected.

The Priory of St. Nicholas may be considered the first of all the Monasteries in Exeter, having been founded by William the Conqueror as a dependency of his noble Abbey at Battle. The establishment soon grew in importance, as is amply proved by the fact that when, in 1346, water was brought by the Dean and Chapter of Exeter to the conduit in the Cathedral Close, one channel was reserved solely for the Priory of St. Nicholas. In 1842, when excavations were in progress for a cellar on the site of the Lady Chapel of the Monastery, the body of Lady Matilda Courtney was disinterred from its resting-place of four hundred years. At her decease, she left certain tenements in the High Street with the payment of 1*d.* to thirteen poor people yearly. It is curious that it was only the last of the priors who attained any dignity in the Church. William of Colliton, or Collompton, was appointed to a Canonry on the death of Richard Sydnor in 1534. Subject to the sanction of the Local Government Board, it has been decided to purchase the property, and thus a valuable addition will be made to the interest and attractions of the City of Exeter.

Ancient Monuments Protection Bills.

On the motion of Lord Herschell, a committee, consisting of the Duke of Northumberland, the Earl of Plymouth, the Bishop of Bristol, Lord Sheffield, and Lord Southwark, has been appointed to join with a Committee of the House of Commons to consider the Ancient Monuments Consolidation and Amendment Bill, the Ancient Monuments Protection Bill, and the Ancient Monuments Protection (No. 2) Bill.

Tattershall Castle: Recovery of the Fireplaces.

Lord Curzon of Kedleston [*H.F.*], with the assistance of a number of generous lovers of antiquity in the county of Lincoln and elsewhere, has recovered the famous carved stone fireplaces, dating from the fifteenth century, which were taken out of Tattershall Castle last year. The work of restoring the castle and its surroundings to their former condition, as far as can legitimately be done, has already been begun by Lord Curzon; and as soon as this is sufficiently advanced the fireplaces will be restored to their original position in the castle walls. It is estimated that the works at Tattershall will not be completed until next year, when Lord Curzon proposes to throw them open to the public.

Architectural Tour in France.

The Rev. Dr. West [*A.*], pupil of the late E. M. Barry and of Viollet-le-Duc, and author of *Gothic Architecture in England and France*, proposes to conduct an architectural tour in France during the ensuing summer, taking one of the following itineraries, or some combination of them, Rouen or Paris to be the starting point: (*a*) The *Caen* district, including Le Mans, Alençon, Séez, &c.; (*b*) The *Soissonnais* and *Beauvaisais*, including Amiens, Beauvais, Morienval, Pierrefonds, Coucy, Reims, Laon, &c.; (*c*) The *Ile de France*, including Mantes, Poissy, Troyes, Sens, Bourges, Orléans, and Chartres; (*d*) *Burgundy*—Troyes, Langres, Dijon, Auxerre, Vézelay, Nevers, Bourges, Chartres; (*e*) *General*—Chartres, Le Mans, Angers, Poitiers, Angoulême, Périgueux, Le Puy (?), Clermont, Bourges, Nevers, Vézelay, Dijon, Sens; (*f*) *Southern*—Toulouse, Cahors, Albi, Carcassonne, Narbonne; (*g*) *Provence*—from Dijon to Arles, and back by Le Puy, Clermont, &c. The number of the party will not exceed fifteen. Dr. West's address is Selsley Vicarage, nr. Stroud, Glos.

The Regent's Quadrant.

In the JOURNAL recently, attention was called to the competition instituted by the *Builder* for a façade for the Regent's Quadrant which will continue Mr. Norman Shaw's design in such a manner as may not be open to the criticisms of the retail tradesmen for whom the premises are intended. It is now announced that Messrs. Swan & Edgar, whose premises occupy a large part of the site, are prepared to take an active interest in the matter, either by giving an additional premium to those offered by the *Builder*, or "if practicable a professional position which will enable the successful competitor to put his design into material form." Particulars are given in the *Builder* for 19th April and 3rd May. Designs may be sent in up to 28th June.

Obituary.

PETER KERR, the well-known Melbourne architect, whose death is announced at an advanced age, was for many years a Fellow of the Institute, but resigned membership a few years ago, having been long retired from practice. Mr. Kerr was articled to Mr. Archibald Simpson, of Aberdeen, over seventy-three years ago, and was afterwards in the office of Mr. Geo. Fowler Jones, of York. About the end of 1845 he removed to Dunrobin Castle, Scotland, where he was engaged on the extensive additions to the Castle. On the completion of this work he came to London and entered the office of Sir Charles Barry. In 1852 he emigrated to Australia and after a brief experience of cattle-raising on the Upper Yarra returned to his profession as an architect in Melbourne, first in partnership and subsequently on his own account. His principal works included the Harbour Trust Offices, the Chinese Court of Arbitration, Port Phillip Club Hotel, and the first part of the Houses of Parliament. In 1877 he entered the Government service and was appointed by the Royal Commission of Parliament Buildings as their architect of the Houses of Parliament. Mr. Kerr had a share in designing, detailing, and carrying into execution Government House, the new Law Courts, and the Public Office. He also carried out the Registrar-General's Office, and extensive additions to the General Post Office.

EDWIN E. PINCHES, whose death occurred on the 17th May, had conducted the Preliminary Examinations of the Royal Institute for over twenty years past. Mr. Pinches was born in 1838, the son of a London schoolmaster, and took his degree in the University of London in 1857. He was engaged in educational work all his life, and was a member of the Council of the College of Preceptors for over forty years, during twenty-five of which he filled the office of Treasurer. His extensive knowledge, his ability and accuracy, and the eminently judicial quality of his mind, specially fitted him for the responsible duties of an examiner, in which capacity his services were in much request by public bodies, including the University of London, the College of Preceptors, the Joint Scholarships Board, the R.I.B.A., the Surveyors' Institution, and others.

Architects' Benevolent Society.

At the Annual General Meeting of this Society held on the 11th April, Sir Ernest George, A.R.A., in the Chair, the Annual Report of the Council was submitted as follows:—

In submitting their sixty-second annual report the Council regret that they have again to record a diminution in the amount of the Society's subscriptions. The difference is small as compared with last year, but it is significant in view of the fact that a special letter of appeal was issued by the President in October to over five thousand architects practising in the United Kingdom. The result of the appeal, although scarcely realising anticipations, increased by new or additional subscriptions the total amount received by £41. 18*s.* 6*d.*, while the sum of £124. 8*s.* 6*d.* was added to the Society's capital from donations received in response to the appeal. The Council feel that the number of contributors on the Society's books (the total number of subscribers is 512) is inadequately representative of so large a profession; they are also assured that the result of advertising, while extending knowledge of the Society, leads to an insufficient return for the expense incurred. It is felt, therefore, that the subscription list must mainly rely for its support upon the efforts of individual members and upon the corporate action of the metropolitan and provincial architectural societies. In this connection, the thanks of the Society are due to Mr. Watson Fothergill, the Local Honorary Secretary of the Nottingham Society of Architects, who secured numerous fresh contributions.

During the year the sum of £1,031 was distributed in relief; £245 being paid to pensioners, while £786 was disbursed in grants among seventy-four applicants. A pension having become vacant, various applications were considered and the annuity was finally granted to the widow of an architect.

The total amount received in subscriptions was £707. 5*s*. 6*d*. (as compared with £716. 14*s*. received in 1910); while the amount received in donations was £296. 14*s*. (as compared with £109. 15*s*. received in 1910), including Professor Aitchison's bequest of £90. Donations were also received as follows: Sir Ernest George £20 and £4; Mr. Edgar Wood £21; Mr. Edward B. I'Anson £15. 15*s*.; Mr. Arthur Ashbridge £10. 10*s*.; Mr. Thomas Dinwiddy £10. 10*s*.; Mr. Archibald M. Dunn £10; Mr. John Belcher £5. 5*s*.; Mr. John Borrowman £5. 5*s*.; Mr. F. W. Foster £5. 5*s*.; Mr. Banister Fletcher £5. 5*s*.; Mr. Henry Lovegrove £5. 5*s*.; Mr. W. Hilton Nash £5. 5*s*.; as well as various smaller sums. With the amount carried forward from last account together with the donations received during the year the Council were enabled to increase the Society's investments by the purchase of £500 Queensland 3% Inscribed Stock at a cost of £424. 14*s*. 6*d*.

At the beginning of the present year, the family of the late Mr. John T. Christopher presented, through Mr. Freville Christopher, £105 New South Wales 3½% Inscribed Stock in memory of their father, who was himself a liberal benefactor of the Society.

It is with great regret that the Council have to record the death of Mr. William Glover, and Mr. T. M. Rickman, the two Vice-Presidents of the Society. Mr. Rickman had been a subscriber since 1872; he served on the Council on many occasions, and always took an unfailing interest in its work. The association of Mr. Glover was more recent, but since he came to live in the South of England he took an active part in the progress of the Society, generously contributing himself and influencing the contributions of others, greatly to the advantage of both income and capital.

The following, being the five senior members, retire by rotation from the Council: Mr. Charles Blomfield, Mr. John Borrowman, Mr. C. R. Baker King, Sir Charles Nicholson, and Mr. G. E. Bond. To fill the vacancies caused by these retirements the Council have the pleasure to nominate Mr. Henry Lovegrove, Mr. E. Arden Minty, Mr. Rowland Plumbe, Mr. William Woodward, and the President of the Society of Architects.*

The Council have the pleasure to nominate Mr. H. L. Florence for election as Vice-President.*

The thanks of the Society are due to the Royal Institute of British Architects for office accommodation and to the staff of the Institute for assistance, always cordially rendered, in any matter connected with the Society.

The Report was adopted, and the Chairman announced a bequest to the Society of £200 from Mr. Thomas M. Rickman, and donations of £15 from the Society of Architects and £3 3*s*. from Mr. C. H. Löhr.

* These gentlemen were duly elected, and Mr. W. Hilton Nash was re-elected Hon. Treasurer and Mr. Percivall Currey, Hon. Secretary.

THE EXAMINATIONS.

The Final Examination: Alternative Problems in Design.

Under the new scheme of Testimonies of Study for the Final Examination * six alternative Problems in Design are to be set by the Board of Architectural Education each year, and candidates must submit designs in answer to at least four of the problems. The problems will be published twice a year, three sets in January and three in July. Candidates for the examinations in November next may avail themselves of the new scheme, but after next year it will be compulsory on all candidates. Several Students entering for the Final next November are taking advantage of the new scheme and have sent in designs. Appended are the problems set and the names of the Students whose work has satisfied the Board:—

Subject I. (*a*).—(A large Monument to commemorate King Alfred's Refounding of London.)—Messrs. H. A. Dod, Hal Harper, Ernest Prestwich, H. C. Bradshaw.

Subject I. (*b*).—(A Terrace of Five Houses.)—Messrs. R. F. Dodd, Walter E. Woodin, S. Stevenson Jones, W. Harding Thompson.

Subject II. (*a*).—(A large Monument to an Explorer.)—Messrs. H. Lidbetter, R. S. Dixon, F. O. Laurence, F. A. Broadhead, R. Duckett, E. F. Bothwell, C. M. McLachlan, W. E. Woodin, R. A. Barber, J. O. Cheadle.

Subject II. (*b*).—(A Cloister with External Entrance Gateway or Tower to a Collegiate Building.)—Messrs. H. A. Dod, H. C. Bradshaw, E. Prestwich.

COMPETITIONS.

King's Heath Baths Competition, Birmingham.

The Council of the Birmingham Architectural Association have addressed a letter to the promoters of this competition objecting to clause 4 of the Conditions, which reserves to the promoters the right to appoint an independent assessor or assessors, and urging that the usual course followed in public competitions of importance should be observed—viz. that the President of the Royal Institute of British Architects be requested to nominate an assessor. Meanwhile the Council have circularised the members of their Association asking them to abstain from competing until the offending clause has been amended.

* JOURNAL, 13th January 1912, p. 191.

REVIEWS.

SMALL WATER SUPPLIES.

Small Water Supplies. Being a Practical Treatise on the Methods of Collecting, Storing, and Conveying Water for Domestic Use in large Country Mansions, Estates, and small Villages and Farms. For the use of Engineers, Estate Agents, and Owners of Property. By F. Noel Taylor. 8o. Lond. 1911. 6s. net. [B. T. Batsford, 94 High Holborn, W.C.]

This work, consisting of 162 pages of clear print on good paper, and containing 126 well-produced and useful illustrations, is a short, compact, and very practical book. It supplies useful data, without incorporating lengthy descriptions of extraneous matter. Its perusal should prove very useful for that section of the profession engaged in arranging water supplies in the more rural areas where no public company's water is available.

The first chapter is devoted to "Properties of Water and Sources of Supply." It seems somewhat strange that the author should advocate the calling-in of a water diviner when in doubt as to the existence of water, but there may still be some who retain belief in the diviner's powers. But on the same page the author suggests calling in a water expert before commencing any engineering work. The latter most certainly appears to be the more reliable course. Where abundant river water of poor quality is available, the author advocates sinking a well for drinking water, the former raised by mechanical power, the latter by hand pump only—no house connection being made for this latter supply, and one tap only being supplied for river water inside the house. This is advocated in order to make servants discern between the two supplies, and allows of no confusion. But servants are human, and where they have of necessity to go outside the house in all weathers and pump all potable water, a mistake may easily be made either through laziness or wilfulness in order to save the little hand labour and inconvenience necessary—and the drinking water may be drawn from the tap, with anything but pleasant results (if not danger) to the consumers.

Chapter ii.—"Wells and Well Sinking"—is very practically written and illustrated, and enables the architect of ordinary intelligence to sink either an artesian or an open well in any strata in ordinary circumstances, and the various cutting and removal tools are clearly illustrated for the particular strata to be dealt with.

In chapter iii.—"Flow of Water in Pipes and Channels," the reader is at once informed that the author is going over ground previously covered by other writers, but the aim of the present work has been to condense the information so as to avoid all unnecessary calculations, and only those points interesting or essential to the architect who desires to instal a water scheme have been included. This has been faithfully and very practically carried out, and must be appreciated by those perusing the book.

"Pumping Water" forms chapter iv. This chapter belongs almost exclusively to the engineer. It deals fully with the various types of pumps, and the different powers for working them. It is more interesting than useful to the general architect, but a very sound piece of advice is given on page 103 in regard to the selection of engines: "Never select an engine which is just equal or barely equal to the required duty." This first economy is a frequent source of trouble, and it cannot be too well impressed upon those selecting an engine to ascertain that it is of such power as to be able to perform its work comfortably. An engine, like a horse, or a human being, becomes fatigued if overstrained, and constant repairs, inconvenience, and needless expense are the result.

Chapter v., dealing with "Storage and Distribution," gives full scope for the architect who is desirous of working out formulæ for the various kinds of retaining walls, tanks, and reinforced-concrete water-holders; but the calculations are simplified as far as possible, and anyone with an ordinary knowledge of mathematics can follow them without embarrassment; and although very largely a compilation yet those selected are concise and useful. The calculations gone into for the construction of a ferro-concrete water tank to hold 6,750 gallons (fig. 97) are quite up to date, and at the same time they deal with a most inexpensive and efficient method for water storage. Following the formulæ, some very useful illustrations of water filtration and storage reservoirs are given, and the arrangements of the pipes for a model mansion are described and illustrated. This chapter is practical throughout, and all superfluities have been omitted.

Appendix I. discusses the cause of noises which occur in service pipes and their remedies.

Appendix II. supplies more detailed information on the method of sinking an Abyssinian tube.

On the first page the author mentions in detail the right and the wrong way of taking samples of water for analytical purposes, but he fails to inform his readers on one important point, that is, all samples should be drawn from under the surface at about one-third the depth of the water.

On page 11 very useful mention is made of the destructive effect of some waters on lead and iron pipes. This is a point which should call for more consideration from Local Authorities possessing waterworks. It is by no means uncommon for one authority to compel the use of lead pipes in their by-laws, whilst another authority, with water of a similar nature, restrict the pipes to iron.

The strut in fig. 45 is figured 1 inch by 7 inches, but it is shown by calculation to be 12 inches by 7 inches.

The salient feature of the work is its conciseness. The busy architect who has no time to waste in

theorising on the various sciences and side issues which generally cluster about a treatise of this kind can here find information clearly and briefly given.

HAROLD GRIFFITHS [*A.*].

CORRESPONDENCE.

Pierre Puget.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Professor Blomfield raises an interesting point when he questions the identity of Puget the sculptor and architect with the designer of Montagu House. The name of the latter is given by his various biographers a wide latitude of spelling. De Piles, for instance (*Art of Painting,* 1754), calls him Pughet, and other variants are Pujet, Pougey, and Pouget. It is under the latter form that he appears in Lance's *Dictionnaire des architectes français.*

Neither Lance nor Professor Blomfield quite realises that though *a* Montagu House was, as they say, built in 1678, it was from the designs not of Puget but of an Englishman. This we learn from Evelyn's "Diary," 5th November 1679:—"To see Mr. Montagu's new palace, near Bloomsberry *built by* our [i.e. the Royal Society's] curator, *Mr. Hooke.*" Under date October 10, 1683, Evelyn refers to a second visit, and describes at some length the building and its ceilings by Verrio and paintings by Holbein. But on 19th January 1686 he records: "This night was burnt to the ground my Lord Montagu's Palace in Bloomsbury." We learn also from Ellis's "Letters": "Whitehall, the 21st January 1685–6—On Wednesday, at one in the morning a sad fire happened at Montagu House, in Bloomsbury." Lady Rachel Russell describes the destruction of the house in a letter dated 20th January 1685. We thus have, beyond dispute, a date immediately preceding the building of the second Montagu House, admittedly from the designs of Puget. It undoubtedly took place, as Britton and Pugin state (*Public Buildings of London,* vol. ii. page 55), "about 1687." In his edition of Cunningham (1891, vol. ii. page 555) Mr. Wheatly says, "Pierre Puget or Poughet was sent from France to design the second Montagu House." Seeing then from Evelyn's and other evidence that the second Montagu House can only have been commenced after 1686, the carving of the Versailles Milo in 1678, referred to by Professor Blomfield, can hardly have interfered with Puget's acting as architect for the new building.

It is furthermore difficult to avoid recognising a too-extraordinary coincidence in the theory that a Puget and "a certain Pouget or Poughet" existed side by side, and both architects of eminence. For we have to imagine the latter of sufficient importance for his selection to carry out an important building in a foreign country, and yet an architect whose record is confined, so far as we know, to this one piece of work alone.

With regard to Mr. Gotch's communication in the reprinted Paper it seems more than likely that the arabesque designs (of one of which, as he says, he gave an illustration in his paper on the Smithson drawings) are by Puget. Comparison between this illustration and the signed drawing in the Institute Library show very strongly marked resemblances in style and execution. It is quite conceivable that the collector, or at all events arranger, of the Smithson drawings, who mounted them, as Mr. Gotch says, in "the second decade of the eighteenth century," approached Puget's curiously-Protean name phonetically, and hence noted the drawing as being by "Mr. Boujet."

Referring to Mr. Kershaw's letter, no one who makes use of the Institute Library can fail to recognise how much it owes to the late Wyatt Papworth's constant and scholarly interest. Acknowledgment of his labours and of those of some others, and of the large and special donations by which we have benefited, would perhaps be more fittingly made when, as I suggested, the Library as a whole and more particularly its books are made the subject of what I hope will some day form a highly useful and interesting Paper.—Yours faithfully,

C. HARRISON TOWNSEND [*F.*].

Zinc White *v.* White Lead.

46 *Lincoln's Inn Fields, W.C.: 15th May* 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—In the interests of workmen who are house-painters let us hope that all architects and builders will read Mr. A. S. Jennings' valuable paper published in your last issue as to the effects of white lead paint on the workman's health. It was the knowledge of the fact that several men on my works suffered from what is popularly known as "painters' colic" which led me, thirty years ago, to discover and specify for all interior use the zinc pigment known as "Charlton White." In one house wholly decorated with this body which I visited nearly twenty years later the work was almost as good as when executed. I did not venture to use it externally, not being sure whether it would stand great heat and cold, and considering that the workmen would not suffer so much by using lead paint in the open. For many years I have ceased to struggle against the inveterate prejudice of the builders and decorators who maintained that their men did not suffer from lead poisoning, that zinc white did not cover so well, and that the men objected to using it. The facts, however, which Mr. Jennings gives in his paper, especially as to the prevalence and effects of this poison, as to the rate of insurance under the Employers' Liability Act, and as to Continental experience and legislation, should stimulate us to act promptly in favour of the use of some equally

effective and non-poisonous base for protective and decorative paintwork.—Yours faithfully,

W. H. Seth-Smith [*F.*].

The Decadence of English Architecture (p. 495).

St. Moritz, Eastbourne: 17th May 1912.

To the Editor, Journal R.I.B.A.,—

Sir,—It is not surprising that two such observant travellers as Messrs. Hubbard and Cross should return obsessed with the traditions of Renaissance architecture as developed in France. As Englishmen they are naturally impressed with the curriculum of the Ecole des Beaux-Arts and the resultant work of the architects trained there, and as Englishmen they forthwith deprecate both the architectural schools in England and the men trained here.

Much is to be said in favour of the eight or ten years' course required at the Beaux-Arts, and much is to be said against it. Its students are so dominated by the principles of Vignola and the traditional methods that originality of thought is dwarfed. However excellent the planning may be, the façades imported here are generally developments of the Rue de Rivoli or the Grands Boulevards, and it is this that Messrs. Hubbard and Cross greet so cordially upon their return home! The examples they cite are no exception to the usual monotony of Paris street architecture. They do not show the originality of conception which is to be found in many recent interesting examples of our native talent.

How funny it is that the British traveller is always inclined to scoff at his own countrymen, whereas at the ateliers in Paris they scoffed at the men for their lack of courage in not attempting something original in London, where they had the opportunity, free from the trammels of their patrons and academic environment!

Yours faithfully,

R. Goulburn Lovell [*A.*].

The A.A. Schools and the Architectural Museum.

Mr. H. Austen Hall [*A.*], Hon. Secretary of the Architectural Association, asks space for the following letter which he had addressed to the Editor of the *Building News*:—

Sir,—I am completely in agreement with the views expressed in Mr. Maurice Adams' letter on this subject in your issue of last week.

The Council of the Architectural Association has for many years been primarily concerned with educational matters, and is at the present moment maturing a scheme of a three years' course instead of the two years' course in the Day School. Students who take the third year's will concern themselves principally with advanced design of a monumental nature, and will then be encouraged to go on to the Academy Schools for a continuation of the work begun by the Association. This has been decided upon as the definite policy of the Architectural Association Schools in the future, and the Council of the Royal Academy has extended practical encouragement to the Architectural Association students who are qualified to go to the Royal Academy. The comprehensiveness and breadth of outlook in artistic matters for which the Academy stands, and the advantage to architectural students of associating with painters and sculptors, have been fully realised. The prestige of the Royal Academy, and the glories of its Gold Medal, will still remain the Mecca of the ambitious student, and it concerns us to give the necessary preparatory education in a thorough manner.

The *Building News* refers to a new departure closely allied to the well-being of the School, viz. the exhibition of half-inch detail drawings and photographs of executed works, which closed on Saturday last. The students are enabled to see contemporary work by our leading men in a form which permits of intelligent study and observation. An Exhibition Committee has been formed, and it is hoped to hold a succession of really educational loan collections of modern work to supplement the training given in the Schools.

Recent French and German architecture will alternate with English work, and our students will not fail to form their own opinions on the "Decadence of English Architecture." Certainly until the points of "decadence" are located, and the comparative merits of English and foreign work clearly defined, all this depressing talk on the subject will not lead us anywhere. We believe, with a constant and painstaking system of comparisons, in the manner referred to, that the Association will be taking the first really practical steps towards the realisation of our position.

Mr. Maurice Adams' fears for the Architectural Museum are without foundation. The Museum is left to us with certain conditions attaching to it, and our intentions are not to override these conditions, but rather to develop and add to the collections under our care from time to time, so that our students may have within their doors a comprehensive collection of casts showing the architectural development of this country and others.

There is no doubt that the majority of the casts would be more suitably housed in reserve collections, because many of them are useless to the student in their present crowded state, but that cannot come about until the building can be adapted for that purpose.

Mr. Maurice Adams is an old friend of architectural education, and his views command respect, and it is with great pleasure that I am able to state a policy so completely in accord with his own suggestions. It is not to the Beaux-Arts that we need look, but to ourselves. The sympathetic support of the whole profession and the energy of the students are the only means wherewith to fight "Decadence" in any form.

We are bound to fall short of the ideal state in our education until we receive the Government aid upon which architecture has such just claims, but there are things we can do among ourselves that come first, and prepare the way.—Yours faithfully,

H. Austen Hall,
Hon. Sec. Architectural Association.

Architectural Education.

University of London: University College.
22nd May 1912.

To the Editor, Journal R.I.B.A.,—

Sir,—Messrs. Hubbard and Cross naturally cannot be expected to know what developments are contemplated by the different architectural schools in this country, and certain statements in the letter from them which is published in the Journal of the 11th inst. leave me considerably in doubt as to whether they are acquainted with the work the schools are doing at present.

In view of these statements it would be interesting to know whether they have visited any of the architectural schools in this country, and, if so, when were their visits paid and to which schools ?

Yours faithfully,

F. M. SIMPSON [*F.*].

The Institute and Registration.

St. Moritz, Eastbourne : 17*th May* 1912.

To the Editor, JOURNAL R.I.B.A.

SIR,—After all the cavilling and fault-finding of late, how refreshing to read in your last issue the letter from Mr. W. H. Seth-Smith ! Of course the experimental procedure on the part of the Council was a wise and prudent step. It has helped forward registration many years.

Much better that the Institute and the Society should remain two separate bodies; each has its province and its work in advancing the interests of the profession. Registration can never be secured without the co-operation of both these and other bodies. The Council is to be warmly commended for opening the doors and paving the way for a Bill to be carried forward another step. Many difficulties have yet to be encountered, but instead of naggling among ourselves let us co-operate with our colleagues with the consideration and courtesy that it is understood one professional man should show to another.—Yours faithfully,

R. GOULBURN LOVELL [*A.*].

Competitions.

21*st May* 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the R.I.B.A. KALENDAR there are given the Regulations governing Architectural Competitions, and as certain of these are stated to be "essential" one therefore presumes they must be complied with by promoters before members of the Institute can be allowed to compete. These Regulations can be read by all, and are clear enough to be understood by all. In any public competition, therefore, where the conditions of the promoters do not comply with these Regulations, surely all members of the Institute should refrain from drawing even so much as a line until such time as the conditions are revised, and certainly in any negotiations that may be carried on with a view to such revision one would expect the Institute to insist that the necessary revision should be made in reasonable time, and thus enable all members to compete who may desire to do so.

In a recent competition advertised in the press the conditions issued by the promoters were not in accordance with the R.I.B.A. Regulations, but about three days before the date for plans to be sent in, it was stated that those Regulations had, after negotiations with the R.I.B.A., been agreed to by the promoters, and that the President had accordingly appointed an Assessor. It is obvious, therefore, that if any members of the Institute sent in drawings they must have been working upon them before the conditions were altered, or at any rate before the fact of such alteration was made public, and this would appear very much like disloyalty to the Institute on the part of such members.

And what can be said for the Institute itself when an Assessor is actually appointed as judge in a competition from which many members, because of their adherence to the R.I.B.A. Regulations, have been shut out, apparently owing to the lack of foresight and energy of those at headquarters to whom the members naturally look for guidance in such matters ? The least one can say is that it cannot tend to encourage loyalty to the R.I.B.A. on the part of its members, and this is a matter for the deepest regret.—Yours faithfully,

HENRY W. COUSSENS [*A.*].

MINUTES. XIV.

At the Fourteenth General Meeting of the Session 1911-12, held Monday, 20th May 1912, at 8.30 p.m.—Present : Mr. Leonard Stokes, *President,* in the Chair; 34 Fellows (including 16 members of the Council), 42 Associates (including 3 members of the Council), 6 Licentiates, and several visitors—the Minutes of the Annual General Meeting, having been published in the JOURNAL, were taken as read and signed as correct.

The Hon. Secretary announced the decease of Peter Kerr, of Melbourne, for many years a Fellow of the Institute, but recently retired; Henry Shackleton, *Associate,* elected 1906; Ernest Theodore Felgate, *Licentiate.*

The following candidates, being found eligible and qualified according to the Charter and By-laws, were nominated for election—viz. : As FELLOWS (3) : Ernest Gladstone Allen [*A.* 1904]; Walter Pott [*A.* 1888]; Haydn Parke Roberts [*A.* 1907], Worthing. As ASSOCIATES* (12) : Henry Humbley Archer, P.A.S.I. [*S.* 1910], Windsor; Herbert John Leslie Barefoot [*S.* 1909]; Royston John Keith Harris [*Colonial Examination* July 1911], Sydney, N.S.W.; John Burton Healing [*S.* 1909], Leicester; Philip Dalton Hepworth [*S.* 1910]; Cecil Howard Lay [*S.* 1909], Saxmundham; Robert Dewar Nicol [*Special Examination*], Calcutta; Geoffrey Owen [*S.* 1909], Warrington; Reginald Shears [*S.* 1909]; William Bernard Stedman [*S.* 1908], Margate; Russell Stockton [*S.* 1906], Stockport; Charles Voysey [*S.* 1909].

A Paper on RECENT UNIVERSITY ARCHITECTURE IN THE UNITED STATES having been read by Mr. R. A. Cram, Litt.D., F.A.I.A., F.R.G.S., and illustrated by a numerous series of lantern slides specially provided by Mr. Cram, on the motion of Mr. Edward Warren, F.S.A. [*F.*], seconded by Sir Aston Webb, C.B., C.V.O., R.A. [*F.*], a vote of thanks was passed to him by acclamation.

Further, the meeting testified its cordial appreciation and thanks for the many courtesies bestowed upon the President of the Royal Institute by the American architects during his recent visit to the United States.

The proceedings closed and the meeting separated at 10.20 p.m.

* Except where otherwise stated, all the candidates passed the qualifying examination last November.

Architectural Library

THE R.I.B.A. CONDITIONS OF CONTRACT: SOME POINTS FOR REVISION.

By A. Saxon Snell [*F.*].

Read before the Royal Institute of British Architects, Monday, 15th April 1912.

IT is due to the Practice Committee that I should in the first place explain that what I have to say this evening does not necessarily represent the Committee's present views, if only because under the operation of the By-laws I am no longer a member of the Committee and have not been in touch with its work for nearly two years. A Sub-Committee has been engaged, so I understand, for a considerable time upon a revision of the Conditions of Contract, but the work is not yet finished. It was due to this (and perhaps also because I had taken an active interest in the subject before ceasing to be a member of the Committee) that the Chairman did me the honour of asking me to prepare a Paper, and I accepted on the understanding that, as I had no first-hand knowledge of the Committee's views, I should write as a "free lance."

Since this Paper was drafted, I have had the advantage of hearing Mr. White's interesting general survey of "The Newer Responsibilities of Architects," * and the valuable digest of cases given to us by Mr. Greenop*; and I am conscious that my own contribution cannot be compared in practical value to theirs. I have, however, endeavoured to present a case for revision of the Conditions of Contract upon a consideration of general principles, which may, or may not, be of service later in our search for a Form of Contract which shall be based upon the real as opposed to the conventional relations between the building owner, contractor, and architect.

It is neither usual nor desirable that Standing Committees' reports should be published, unless with the approval and under the sanction of the Council; but I do not think I am indiscreet in quoting, for the purpose of opening my subject, the preamble of a Memorandum drawn up by the Practice Committee and submitted to the Council in 1907. I might escape any suggestion of impropriety by paraphrasing its statements, but they would lose in the process the lucidity which was the result of careful drafting in Committee. The document states:—

> Questions have arisen as to the effect of a Building Contract under the form of Contract and Conditions recommended for use by the R.I.B.A. These documents were settled in their present form in 1903 in conjunction with the Institute of Builders and the National Federation of Building Trade Employers of Great Britain and Ireland.
>
> The forms previously in use were settled in 1879 and gave considerable power to the architect.
>
> On the settlement in 1903 this was altered at the instance of the Institute of Builders. Certain matters dealt with by Clauses 4, 9, 16, 19, and part of 18, were reserved to the architect, but new words were introduced into Clause 30 which have been held to destroy the effect of a certificate given by the architect, and the arbitration clause was also widened so as to lay open to review every certificate whether interim or final, and (subject to certain reservations) every opinion and decision of the architect.
>
> It has been held by the Court of Appeal in the case of *Robins* v. *Goddard* (21 Times L.R. 120) that the effect

* Journal R.I.B.A., 13th January 1912.

of these alterations is not only to deprive the architect's certificate of all finality as between the building owner and the contractor, but it has also been held by Official Referee Pollock in the case of *Goddard* (building owner) v. *Ferguson* (architect) that an architect who has given a certificate which is successfully challenged by a building owner in an action brought by the builder to recover the amount so certified to be due to him, is liable to repay to his client the building owner the costs incurred in resisting the builder's claim. In giving judgment the learned Official Referee based his decision upon the ground that the architect in his position of agent for the building owner must be held to have contemplated that if he gave a certificate the builder would sue upon it, and that the building owner might resist and incur costs in so doing, and that these costs were within the reasonable contemplation of the architect at the time he undertook to act as such for the building owner as the reasonable and probable consequences of giving a certificate subsequently held to be inaccurate or excessive.

The decision appears to carry with it the conclusion that the architect acting under the present authorised Form of Contract is no longer in the position and clothed with the immunities of a "quasi-arbitrator." It would also seem to follow that under similar circumstances an architect no longer owes a duty of fair and impartial treatment to the builder.

The position as above sketched raises very important questions not only with regard to the position of the architect but also as to the position of the building owner and building contractor respectively.

Such was the situation in 1907, and in succeeding years cases have come from time to time before the Committee all pointing to the need for some alteration of these Conditions of Contract. Let me remind you again that they were the result of a well-meant attempt to meet objections taken by building contractors and others to the older Form of Contract. The concessions made in their interests were necessarily counterbalanced to some extent by further safeguards in the interests of the building owner. The new form was due to the unstinted labours of some of the most distinguished members of the Institute, with the help of expert legal advice, and of course the co-operation of the two bodies representing the building contractors.

Criticism under such circumstances is an invidious task; but nothing we can say in this respect reflects in any way upon the intimate knowledge shown of building conditions as they obtained then, or the ingenuity displayed in the particularly complex task of providing for every contingency. It was not desired to compile an entirely new set of Conditions based upon abstract principles, but to revise an existing one to render it more acceptable to our friends the building contractors without giving away the interests of the building owners. That was a truly conservative policy, and it was no doubt hoped that it would lead to contentment all round. That hope has scarcely been realised; and it would seem that both parties have found, in new and altered provisions, fresh material upon which to base quarrels. If these quarrels concerned only the two parties to a contract the position would be unsatisfactory, but it is made worse in our eyes by the fact that we ourselves—the architects—are more liable to be drawn into them and to suffer the usual fate of third parties.

These circumstances certainly point to the necessity of some revision; and, for my part, I hope this revision will be very thorough, and based, as I have said, upon a "careful survey of the real, as opposed to conventional relations between building owner, contractor, and architect." In the first place the present Conditions are too long and complicated. Obviously a praiseworthy effort was made to meet every sort of contingency; with the result that the document is rather more than twice the length of the former one, and it is far more difficult to follow. It would be an advantage if we could evolve a shorter document with all its clauses in proper sequence, and without repetition or overlapping. It is mainly a question of careful drafting.

This evening I have to confine myself to certain clauses and provisions in these Conditions which directly affect our responsibilities as architects. Even so, with so short a time at my disposal, I can only deal with two points, and the question of drafting has too indirect a bearing upon the matter to be included.

The two points I shall deal with are (*a*) the employment of special tradesmen as sub-contractors, and (*b*) the effect of the Arbitration Clause.

SUB-CONTRACTS.

The average building owner generally imagines that the building contractor is the direct employer of craftsmen in all trades. Indeed, this is implied in our Conditions of Contract, for we have a clause enabling the contractor to sub-let portions of the work subject to the architect's approval of the sub-contractor. As a matter of fact, we know that in modern contracts it is not unusual to sub-let carting, plastering, plumbing, slating, &c. Possibly the arrangement makes for better work, especially if the sub-contractor is himself a master craftsman. As architects, we are concerned only to know that the sub-contractor can and will do the work properly. We do not interfere with the financial or any other arrangement between the parties. We stipulate only that our specification and drawings shall be followed, and that the contractor shall not thereby contract himself out of his liabilities under the contract with the building owner. In other words, we hold him personally responsible for the work of his sub-contractor. There are, however, special works included in buildings which are distinctly recognised as matters which are outside the scope of the building contractor's knowledge and experience, and such as he himself would always delegate to others. Further we *insist* that special tradesmen or master craftsmen shall be employed. We do not even allow him to select the particular tradesman or craftsman; we reserve that right to the building owner or ourselves as his agent.

In a conference of gentlemen all experienced in building works, it is scarcely necessary to apologise for what to the layman may appear distrust of the general contractor; but the best class of contractors accept it without cavil. As architects, many of us devoutly wish we could dispense with these special tradesmen, but experience teaches us that we cannot do so safely; and we have to put up with the extra trouble and even risk involved. In these days of keen competition it is too much to expect that the building contractor will see "eye to eye" with us in their selection, and, what is more to the point, in the amounts to be paid for their special work. To a certain extent, our action relieves them of responsibility, though it may debar them from making the best possible financial arrangements with these special tradesmen; but it should be so worked as to inflict neither loss nor inconvenience to them in the execution of their own work.

In earlier times when contracting was a fairly paid business, and longer time was allowed for the erection of a building, friction seldom occurred, but in these days of quick building and small profits a dilatory sub-contractor may cause serious delay and inconvenience; and many contractors feel that they should have more adequate means of control, and, more especially, the power to withhold payment. On the other hand, our experience teaches us that if this power is conceded it may be used for inadequate reasons, or for purposes which from our point of view are not legitimate.

It must be acknowledged that in Clauses 20 and 28 this matter is dealt with in a manner which meets the difficulty—almost. Indeed, it seems to hold the balance admirably between both parties. Clause 20 may be regarded as safeguarding the contractor, and Clause 28 the special tradesmen. Nevertheless the provision for direct payment to the latter by the building owner is an awkward circumstance, which may yet lead to unexpected decisions in a Court of Law. The case of *Crittall* v. *The London County Council* is a case in point.

My own practice is to nominate the special tradesmen and to fix the net amount to be paid to them. They are made to understand that they can look only to the building contractor for payment, who is solely liable. On the other hand, I have a provision in the building contractor's contract that he must pay these special tradesmen in full such amounts as I may certify from time to time, and the amounts so paid are not included in any payment to him by the building owner until he (the contractor) can produce evidence that they have actually been paid. The case of *Crittall* v. *The London County Council* is sufficient justification for the

apparently arbitrary nature of this last provision. Obviously too, with such a security for payment, we should obtain better terms with the special tradesmen.

My own limited experience leads me to believe that there is no half-way house between taking this strong line and that of leaving the contractor that full control over the special tradesmen which he exercises over his own sub-contractors, reserving to ourselves only the right of nomination and fixing the price to be paid for the work. I am not at all sure but that the latter is under all circumstances (and more especially in our interests) the better of the two methods. Certainly it may relieve us as architects of much worry and work, and no little responsibility; but I have had no experience of this method. On the contractor's side, it removes a possible grievance; and the special contractor—well, the special contractor would look after himself. He should have means of protecting himself; and in any case, he is not obliged to accept a contract under the terms.

ARBITRATION.

Perhaps the most serious defect of these Conditions is that the architect is reduced to the level of mere agent for the building owner. He is deprived of judicial powers. It is a position which we think—to quote again from the Memorandum referred to—"unfair to the contractor, not in the long run to the interest of the building owner, dangerous to the architect, and derogatory to the dignity of our profession."

There used to be a clear distinction, in our relations to the building owner, before and during the carrying out of a contract. In the first place, we were his expert advisers in determining what forms the realisation of his desires should take, and his agents in drafting these forms for the purpose of instructing the building contractor. So soon as a contract was entered into between the parties, to our duties as agent to the building owner in superintending the work was added the honourable one of arbitrator upon points of dispute between him and the building contractor.

(By way of parenthesis, I would remind you that in practice this duality of positions still holds to a large extent, and is generally conceded as a matter of course. Only so can we account for the extraordinary indifference shown by the great majority of building contractors to the Conditions of Contract. It is not too much to say that, in nine cases out of ten, neither contractor nor building owner cares overmuch what is, or is not, in the Conditions of Contract. Time after time, contractors have told me that it is the character of the architect that matters. If they know him to be a fair and just man, they do not care how strong his contract may be or how arbitrary his powers. If he lacks those qualities, no reasonable form of contract can secure them fair play. It is the tenth case for which both parties are compelled to interest themselves in Conditions of Contract, and for which we have to provide. We have to remember too, that well-considered Conditions have an educational value. They form a standard of fair dealing as between building owner and contractor.)

Returning to my premises, this dual position so long held by the architect has been challenged. It is an inconvenience in the eyes of a certain class of building owner, and an offence to his legal advisers. On the other hand, His Majesty's Judges have generally upheld it as eminently reasonable.

I have had the privilege of reading through Mr. Brice's Paper on "The Law relating to the Architect's Certificate," and it is very interesting and instructive. But it seems to show that lawyers are obsessed with the idea of "agency" in the architect's position; and to speak frankly I think they will always do all they can to deprive us of those judicial functions which they consider can only be exercised by members of their own profession. It is a very natural opinion, and not by any means based on selfish considerations. Their training and experience give them a better grasp of the principles of law and equity. Where in our opinion

they fail is in their limited knowledge of the conditions under which a building is conceived and carried into execution, and their failure to perceive that supervising building work is in fact one long arbitration.

In the carrying out of a building contract, innumerable points of difference may, and in fact do, arise between the parties—questions as to interpretation of the drawings and specification, and as to the quality of materials and workmanship. There are infinite grades of excellence in all kinds of work, and the architect has to decide from time to time whether the grade contracted for is supplied. As to whether a certain piece of work has or has not been done is a question of fact, but as to whether it has been done *properly* is a matter of opinion, and in giving his opinion the architect is bound to exercise judgment as between the divergent views of building owner and building contractor.

Is it not absurd and unreasonable that because one party or the other is dissatisfied with the architect's judgment, a specially appointed arbitrator must be called to decide between the parties? Bear in mind that the building owner selects the architect, and that the contractor accepts him and is not bound to enter into the contract if he distrusts the architect. We might view the absurdity of the positions with equanimity if the parties directly interested suffered alone; but we know to our cost that if our honest judgments are overthrown we may be called upon to pay for the alleged wrongfulness; and the measure of the damage is the cost of the arbitration to one or other (if not both) of the parties.

In the old Form of Contract, our final certificate was given this character of an award from which there was no appeal (except on grounds of fraud or collusion) by either party. On the whole the arrangement worked well, and it certainly did prevent a good deal of contention as between building owner and building contractor.

In the present form no decision of the architect binds either party, and certainly not the final certificate. The architect is reduced to the position of mere agent to the building owner, and as such may be sued for exercising his judgment in a way which may not be endorsed by the arbitrator. In spite of this there are those who assure us that the architect who does his duty fairly and reasonably need not fear the perils of the law; but a case such as that of *Lanning* v. *Davis* scarcely inspires confidence in that comfortable belief.

Nevertheless the recent Leicester case seems to show that we are not safe even when our final certificate is an award, and that, failing the building contractor, the building owner can sue the architect in respect of alleged defects or deficiencies in the work. And let me remind you (as Mr. Edwin T. Hall has pointed out) that in this case the R.I.B.A. Contract was not used, and I gather that the architect's certificate was in effect an award as between building owner and contractor. On the other hand, the R.I.B.A. Conditions do not protect us, as witness the decision of the Official Referee in the case of *Ferguson* v. *Goddard*. We are shot at from a different direction, but the effect is the same.

The position is one of great difficulty; for it seems we can never be certain how far we can be made liable for any act or alleged default under a contract. A little consideration of the actual conditions of our employment will show how unjust the situation becomes for us.

The building owner's case is that he has agreed to pay a certain sum for a building constructed according to definite plans and instructions; and he is entitled to the exact fulfilment of the contract. He relies on the architect to see it is so fulfilled and pays him for so doing. At this point we join issue with him. We say that the remuneration we receive is not sufficient to pay for the close and constant supervision which alone would enable us to say with certainty that every part of the contract has been fulfilled. Our supervision can only be occasional and general; and this is so far recognised that it is usual for the building owner to employ a clerk of works for the necessary daily and indeed hourly supervision of the work. It follows that our certificate can only mean that to the best of our knowledge and belief—gained from

such general inspection—the work has been properly executed. Under these circumstances, and provided the architect's immunity is preserved, it seems reasonable that either party should have the right to question the Final Certificate; although I believe that in the long run, and in most cases, mutual acceptance is in the best interest of both parties. Immunity for the architect is however essential, and without it we are faced with very serious responsibilities for which we are very inadequately paid.

Failing the practicability of immunity, there are—as far as I can see—but two courses open to us, *i.e.* either to restore our position as sole arbitrator (which gives us a measure of safety), or to employ, pay, and be responsible for, the clerk of works; and insure against our responsibility at Lloyds' or elsewhere. We should, however, have to raise the amount of our commission to meet the extra cost to us.

In conclusion may I observe that the deeper one goes into the intricacies of these and indeed all Conditions of Contract, the greater is the impression that we have lost sight of the fundamental relations between building owner, contractor, and architect? The failure of one party to realise the legitimate limits of his own interests leads him to make undue claims, which the other meets with counterclaims perhaps equally exaggerated. In other words, they deal with one another as antagonists, rather than as co-operators in a peaceful undertaking. It is an error which permeates many of the commercial relations of individuals—and even nations.

Is there no way out of this "comedy of errors"? May not a re-consideration and re-statement of the fundamental relations referred to bring us back to the reasons of our association, and the benefits which each party may rightly expect to gain therefrom, and which the others should be willing to concede?

We are at the present time seeking to obtain a more definite and better recognised position in the community; and it would be well to take the opportunity of considering what in fairness should be our relations and the limits of our responsibilities to the parties to a building contract. To a great extent it is for us to determine those limits. I do not suggest scrapping the present Conditions of Contract; but they might certainly be shortened, simplified, and divested of the underlying suggestion that building is—as a genial member of the Institute lately put it to me—a "rogue's trade." Building owners and contractors alike may well ask themselves whether on economical grounds alone it is worth while to quarrel. A careful examination of the records of building actions affords convincing evidence that in most cases only the lawyers and expert witnesses benefit. Even the fruits of victory are dearly bought at the cost of worry and the interference with the ordinary course of business; and it may be added that costs as between solicitor and client often form a serious set-off to the monetary value of those fruits.

DISCUSSION ON THE ABOVE AND ON MESSRS. W. HENRY WHITE AND EDWARD GREENOP'S PAPERS ON "THE NEWER RESPONSIBILITIES OF ARCHITECTS"

[Journal R.I.B.A. 13th January 1912].

Mr. R. L. HARRISON, Solicitor, rising at the instance of the Chairman, said it was his pleasant duty to move a vote of thanks to the authors of the three papers—Messrs. White, Greenop, and Saxon Snell. He himself was responsible for the legal side of the Institute Conditions of Contract. The document took five years to elaborate, and he was still unrepentant. They were good at the time, and he did not think they were bad now. The law changed, and that the conditions required modifying was very probable. Decisions in the Courts were always altering the law; and there were more or less unnecessary Acts of Parliament from Westminster which upset previous ideas and necessitated change. He did not, however, think that Mr. Snell would ever find a form of conditions which would avoid discussion and litigation. The subject was too complicated, and points of law

were too much involved to allow of the possibility of that. He had listened to Mr. White's paper with great interest, but he did not think the decisions Mr. Greenop quoted quite made out the case put forward by Mr. White. There were ten cases, in a period of eight years, put forward, selected he supposed from those which would show the responsibilities and liabilities of architects, those which were newer, or those which were actually new. He would eliminate from those ten cases the one about architects' fees, and also that about the custody of plans, which was not very material to the present issue, and in which no question of responsibility was involved. The first case quoted was that in which the man of art and of science rather forgot what was due to his profession and to himself, and almost to his client, and took upon himself the functions of a speculative builder and speculative land agent. He could hardly have expected that the result would have been otherwise than what it was—loss to the client. The next case was one where the architect had specified a cement rendering to a wall, with the object of having paintings put upon the wall; and the case was to the effect that, during the progress of the work, for the purposes of economy some other form of surface was suggested—lime plaster, he believed. But why in that case did not the architect take the obvious course of saying to his client "I have provided cement plaster for the wall, and I can guarantee it if you will give it two or three years to dry. I will take my risk and you may paint upon your wall. If I am wrong I will accept my liability. But if you wish for the purpose of economy to change my design you must do so on your own responsibility; I decline to take the risk"? A letter to that effect would have had the desired result. The next case was that unfortunate one of *Lanning* v. *Davey*. He did not think it fair to say that that case threw upon architects any new or newer responsibilities at all. The more he thought of the case the less clear it became. We had the view of five Judges in all, who disagreed with the jury, and held that the jury were wrong. He did not think that case constituted a precedent or that it would be followed in any future case. In the next two cases—*The David Lewis Trust* and *The Leicester Guardians* v. *Trollope*—he could see nothing new. He attended the consultations between counsel in the latter case, and had all the papers in his office, and the plan on which it turned, and he was in Court when it was heard. It was a £100,000 job, which took three years to complete. It was for the erection of an infectious hospital, which necessitated the building of nine one-story buildings, all exactly alike. The situation was on thick strong clay in a damp position. The architect had very carefully made an ingenious arrangement by which the floor should be isolated from the soil, and upon the proper carrying out of that arrangement depended the permanence and the stability of the building. The time during which the nine different floorings were erected was twelve months, and in that twelve months the architect, as he stated in the witness box, said he had visited the job ten times. The Judge decided that the architect had not carried out the obligation tacitly put upon him by contract to see that the work was properly executed, and upon that he was hit. There was no doubt the architect had got what he believed to be a first-class clerk of the works, in whom however no real confidence could be placed: he had been very particular when the architect went to the job to point out trifling difficulties and troubles, the use of improper materials, and so on, but he had never pointed out the improper construction of the floors, and on no occasion, in connection with any of those nine buildings, although their life depended upon the work, did the architect see it: the work was either not begun when he went, or it was covered in, and he appears never to have asked for any part of it to be opened up. It was hardly fair to say that the builders were men of straw, because they had since made an arrangement by which they had agreed to pay for a substantial part of the damage caused by their own neglect. There was nothing new in that case; the law was well established long ago, that the architect is responsible for carrying out that which the law has always said is one of the duties for which he is paid. That makes six cases out of the ten. There were two other cases, those of sub-contractors. He thought when they prepared the Conditions of Contract that they had dealt with sub-contractors. Clause 16 stated that the function of the architect was only to nominate, to select, or approve; he was to do nothing else. In addition to *Crittall* v. *The London County Council*, which was quoted by Mr. Greenop, there was another case, reported in the *Times Law Reports*, which might be referred to. In July 1910, the architects acting on behalf of the defendant, the building owner, sent to the plaintiffs drawings inviting tenders for certain steel work. At the time the plaintiffs did not know who the builders were. On 20th July the plaintiffs sent the architects a tender for £229, and this was done before communications had passed between the plaintiffs and the builders. Nor did the plaintiffs know the terms of the building contract. On 16th September the building agreement was entered into, so that in that case the architects had obtained from the sub-contractors a contract two months before the main contract was entered into. The architects wrote to the plaintiffs informing them of the name of the building contractor, and they instructed the latter to give them the order for special works. But if before the contract is entered into the architect applies to a sub-contractor and asks him to tender, he cannot be the agent of the contractor, and holds himself out as an agent for the building owner.

MR. SAXON SNELL : Did the architect accept that tender ? He was a foolish man if he did, because it is against our practice.

MR. HARRISON : The architect's duty under those conditions was merely to nominate, select, or approve. But he went a very great deal further than that, and by opening the ball, so to speak, for his client he laid the foundations for a claim by the sub-contractor against the client, which the Judge held to be good. It should not be beyond the wit of man to devise some clause to get over that trouble ; and Mr. Saxon Snell's practice was perfectly sound. If the contractor were sufficiently solvent so that he could be asked to pay somebody else before he himself received payment, the interval not being a very long one, there could be no difficulty. In the case he was referring to the architect had sent to his sub-contractor his own form of tender, his printed form, addressed to himself, which had been accepted by him. There was no doubt that in the last twenty-five years the liability of all professional men had been more rigorously enforced, but he did not think the range of liability had been increased. The surgeon, he supposed, had always been, according to English law, liable for damages if he made a mistake in an operation, and no doubt the position of surgeons and dentists and doctors had in some cases been hard. Solicitors were in the same position. In the old days, and in the case of many clients now, solicitors were credited with doing the best they could for their clients. But in a general way that state of things no longer exists ; the public wanted more for its money, it wanted everything cheaper, and that was at the bottom of the change. There was a legal immunity attaching to the barrister, and for very good public reasons. The barrister went into Court and pleaded a cause, and received an honorarium for his pains. He had no right to sue for his fees, and therefore should not be liable to be sued for negligence. The unfortunate barrister might be attacked for negligence by every unsuccessful suitor, and if an action were to lie against him he would be hampered in his work. He did not think the architect or the dentist or the surgeon would have the same immunity, but would have to face the music, and their only remedy was to pay more strict attention to the business side of their calling or profession. He had had a case where no letter book was kept, no copies of drawings which had been sent, no copies of letters. All was chaos. There must be more businesslike habits. There was one case quoted in which there was "the usual conflict of evidence." That meant that it was oral ; that A said one thing, and B the exact contrary. In the legal profession they were taught that it was good practice in all those cases to take a very simple step which would prevent any such conflict if there were trouble. They all knew the gentleman who did his business by telegrams. He tried to condense his language in the telegrams, and did it in such a way that his telegrams might mean any one of two, three, or four things. Then there was the man who tried to do his business by the telephone, and he was even worse. The right thing to do in such cases was to sit down at once and dictate a letter beginning "Referring to your telegram," or "Referring to your telephone message, I understand the following," and give the purport. If that were done there would be no conflict of testimony, because the best secondary contemporary evidence would be produced as to the effect of that conversation or of those instructions. The architect's next difficulty was in connection with the clerk of works. In most of these cases the clerk of works was found to be at the bottom of the trouble. He was at the bottom of the trouble in *Trollope's case*, and in *Ferguson* v. *Goddard*. He had often thought that there might be an association or something of that sort with a guarantee fund. But if that was not possible their only remedy was to charge a higher fee and do their own clerking of the works, otherwise they would not be rid of these incessant troubles and difficulties in Court. It was Mr. Greenop, he thought, who rather looked to *Roberts* v. *Hickman* as being the case which would get them out of their trouble. It was in the House of Lords, and was not fought on the Institute Conditions ; they were not used in the case. That case only referred to the position of an architect where he was an arbitrator. They must not forget that all professional men were the servants of the public, and that it was a dangerous and difficult thing for them as a body, and for the Institute which represents them, to take a step which was not clearly in the interests of the public. They would find at law that they were liable, as all agents were—he knew they did not like the expression agent, but the architect is the agent of the man who employs him, and that is the English law, and that is the word which is applied to the architect. As such therefore the architect was able to sue for his fees if not paid, and he was liable to be called to account for any neglect or remissness or omission in the services he rendered to his client. He was not sure that the architect did not serve better the person who employed him if he did not occupy this position of arbitrator. In the House of Lords case referred to, the extreme delicacy and difficulty of the position occupied by the architect as arbitrator was referred to ; he (the speaker) had heard it said that a builder who knew he was in the hands of a strict architect did what he could to get "some of his own back" in other ways, making an omission here and putting in a piece of poor work there as a sort of insurance. He did not know whether that was true. He remembered one of the members of the old Committee referring to the builder as "the architect's natural enemy." There was no doubt some picturesque exaggeration about this, but there might be some truth in the idea. The most important remaining cases were *Robins* v.

Goddard and *Goddard* v. *Ferguson*. The first action was brought by Robins, a builder, against Goddard, the building owner. When that was decided, *Goddard* v. *Ferguson*, which was an action of Goddard the building owner against the architect, was proceeded with. The contract in that case was for some additions to a house at a cost of £1,000. The claim of the builder was for £2,105, and the final certificate was £1,055. He had seen the particulars of the damages, and it seemed to him that from garret to foundations the house had practically to be rebuilt and the drains taken out. The tiles on the roof were specified to be Brosley tiles. But they were not Brosley tiles. They were to be fixed to the bars of the roof with rose-headed nails, two to each. But they were not rose-headed nails, and they were fixed with one French nail only instead. He did not know whether that was a serious omission, but it was the fact. The specification said that a cupboard should be constructed under the staircase for the hot pipes to go through, the cupboard being to keep linen in; but anyone inside the cupboard could see the people walking upstairs, and from the stairs one could see into the linen cupboard. The staircase was specified to be of pitch-pine, with a mahogany hand-rail; but it was not of pitch-pine, and the hand-rail was made of deal. The sections showed that the rooms of the house were all to be on the same level, including the added parts. But in the building there were steps in all directions, either up or down, from one room to the other. That was a very shocking case. He did not know whether the architect was ill, or could not attend to his business, or whether the remuneration being so small he left it to the builder. If the building owner had not at English law some remedy against someone for the expenditure in building that house, it would have been little short of a scandal, and it would not have been creditable to the architectural profession. With regard to *Chambers* v. *Goldthorpe*, that had been rather looked upon as the architect's Charter, but he did not think it was quite that. The decision in *Goldthorpe* v. *Chambers* was not the unanimous decision of the Court of Appeal. The Court consisted of Lord Justice Collins, who was afterwards Master of the Rolls, Lord Justice A. L. Smith, and Lord Justice Romer. Lord Justice Romer was one of the most brilliant and most distinguished lawyers of the day, and he dissented from his brethren. At the end of his judgment he said: "I think it would be lamentable that in cases of this kind an employer who pays an architect for supervising work and who has sustained damage by his negligence in the performance of the duties for which he is paid should have no remedy against him." This had been rather a modern doctrine, and he thought Lord Justice Romer was right. He should not be surprised, if a similar case were taken to the House of Lords, that the decision would be a different one. He had made a slip in clause 30. The Judges said there were two sentences, whereas one only was intended. In drafting it they had not made it clear that the language they used conveyed only what they meant, and of course the only object of legal language was to confine it to one meaning. It seemed to him that in remodelling the conditions, to alter the position of the architect would be a very far-reaching step. He felt sure architects would not accept such a change. He should say that the present conditions were founded on two principles. The builder said: "We will come in and make an agreement with you on one condition only, namely, that everything is referable to an ultimate outside arbitrator. Otherwise we will have nothing to do with it. We have been under the harrow of the architects long enough, and we will have no more of it." This was deliberated on by the Building Committee, and Mr. Edwin T. Hall took the burden of the work on his shoulders, and they worked at the new conditions for many months, years in fact, and they were at length agreed. The architects said "We will accept that principle, but we will not be relegated to the position of being superior clerks of works; we must be masters of the contractor, and our orders must be carried out from the beginning to the end. If we make a mistake we agree to be amenable to some outside tribunal." And if that was altered the public would say "For whose benefit are you altering it? For our benefit?" He thought the answer would be No. Were they altering it, then, for the contractor's benefit? Again it would be No. Then it must be for the architect's benefit. And it was for them to say, in these days when the attitude of the public was greatly changed towards the professions, whether this was a suitable and a wise policy.

Mr. W. H. ATKIN-BERRY [*F.*], in seconding the vote of thanks, said he hoped he should not be thought to be in any way detracting from the praise due to the writers of the papers if he said the papers themselves scarcely justified their title. They might more properly have been headed "Some of the Responsibilities of Architects," or "A New Light upon the Responsibilities of an Architect." But he did not find in them anything else which was very new. That was illustrated by reference to the cases so carefully compiled by Mr. Greenop, which were meant to prove those so-called newer responsibilities. Mr. Harrison had given them a very illuminating discourse upon these cases, and he (Mr. Atkin-Berry) felt some diffidence in referring to them after him. They must not form their opinion upon the bare wording of these judgments. They required to know all the details and the evidence, because very often the judgment was based upon one particular point, and unless they gripped the exact purport of that point they missed the true effect of the judgment. Taking them in the order in which they were cited:

in *Findlay* v. *Roques* the damages appeared to be for wrong advice in a matter which was entirely outside the proper functions of the architect; that therefore could not be called a newer responsibility of the architect. In *Keyser* v. *Trask* and *Raikes* v. *Power*, the actions were for negligence, the walls of a building being alleged to be unfit for the purpose for which they were intended. The architects in those cases had a certain thing set them to do, and they failed to do it, either through incapacity, or through want of care or of vigilance. It was only reasonable to suppose that they would ultimately be held responsible for the failure. That was not a new responsibility. In the case of *Lanning* v. *Davey* the architects appear to have been in a most unhappy position. It was a miscarriage of justice in the beginning. Everyone, whether architect or not, stood exposed to the risk of an unjust action at law which he would have to defend, and which perhaps might end disastrously for him. The final judgment in that case was in favour of the architects, and it disclosed no new responsibility. The case of the *Leicester Guardians* v. *Trollope* put the architects in a very difficult position. Mr. Harrison had given some light upon it, but he had not quite satisfied them as to how the architects were to protect themselves against an action of that kind. An architect might take every possible precaution to design his building, to draw up his specification, and to direct the execution of the work: yet, through some bit of devilry on the part of somebody else, something might go wrong. He had no means, perhaps, of discovering it, yet he might be held liable, while the builder escaped unscathed. That seemed very hard, and if Mr. Harrison could enlighten them as to how they were to protect themselves against responsibilities of that kind, he would do them a valuable service. *Robins* v. *Hickman* was a case in which the architect had withheld his certificate under the influence of the building owner. But, as was well known, that was a most improper thing to do, and if an architect did such a thing he must take the consequences. That was no new responsibility. As to that decision being a reversal of that in *Goddard* v. *Robins*, Mr. Harrison had shown them that it was not so. There was nothing inconsistent in the case of *Robins* v. *Hickman* as compared with the case of *Goddard* v. *Ferguson*. If the architect's certificate was to be worth anything, he must be responsible for it, and if he gave a certificate in a careless manner, and the client laid out his money on the strength of it, and it was found to be faulty, the architect had no right to complain if the owner held him responsible. As regards the case of *Crittall* v. *The London County Council*, they had to ask themselves, especially after hearing Mr. Harrison, what course an architect should take in regard to the work which he wished the subcontractor to carry out? The course Mr. Snell suggested was familiar to all of them and was one which probably was most usually adopted—viz. to indicate to the sub-contractor that he must look to the contractor, and to the contractor only, for the order and for payment, and not to the building owner. He should like to know from Mr. Harrison whether that would give the architect and the owner security against a claim by the sub-contractor direct. If not, he did not know what course was open to them if by so acting they became agent for the building owner. He would not go further into the details of those cases. After being tumbled about in the tempestuous waves through which Mr. White's and Mr. Greenop's Papers took them, it was a comfort and a relief to be brought into more pacific waters by Mr. Snell's Paper. Mr. Snell seemed to hold out the olive branch; he put in a plea for greater simplicity in their conditions of contract and for more mutual confidence between owner, builder, and contractor. That was a counsel of perfection, a consummation devoutly to be wished. The difficulty would be to effect it. There was no doubt that the tremendous elaboration of agreements and conditions of contract tended to create suspicion all round. It had this difficulty, that when one began to particularise greater weight was given to the things which were omitted. The things put into the agreement might be of great importance, but the thing left out might be still more so if on that point a dispute arose. He agreed with Mr. Snell that it would be very desirable to simplify the conditions of contract; but how to do it was another matter. It would be a satisfaction to everyone if there could be more of that old-fashioned trust between contractors, owners, and architects which we now see so little of. In these days each and all seemed to be antagonistic—always on the high pitch of suspicion. That was at the root of much of the trouble and anxiety which devolved upon the architect. If he (Mr. Atkin-Berry) had said anything which might be regarded as adverse criticism, he hoped it would be taken in the spirit in which it was intended. Even were they mere bogies which the authors of the papers had placed before them, if they had the effect of arousing architects to a sense of their responsibilities, the profession would owe them a great debt of gratitude, and he had pleasure in seconding the vote of thanks.

Mr. WM. WOODWARD [*F.*] said that if the Papers had done nothing else, they had brought into that room two lawyers who had given them the benefit of their views and of their legal knowledge on the points referred to. That evening they had had the additional advantage of listening to another lawyer, Mr. Harrison, who was partly responsible for the Conditions of Contract which had caused so much difficulty in their interpretation. He agreed with Mr. Harrison and Mr. Atkin-Berry that really there were no newer responsibilities for architects. Forty or fifty years ago the architect was as responsible to his client for

the proper construction of his buildings and the relief to him from litigation as he was to-day. But what had undoubtedly arisen was that there was more desire on the part of clients to bring into the Law Courts cases which forty or fifty years ago were settled outside. And he need scarcely remind them that to fight a case now was a very serious, expensive, and indeed a ruinous matter. As regards the recent case of *Minter* v. *Waldstein* it was only due to further litigation that he was prohibited from reading a Paper on that subject which he had expressly prepared for the Meeting. In that case, the hearing lasted thirty-one days before the Official Referee, Mr. Muir Mackenzie, who, he must say, conducted the case with an amount of acumen and desire for fairness which was most satisfactory to all who listened to him. Mr. Blanco White was in that case, and would agree with him that, apart from the result, no man could have listened to a case with more care and attention than did Mr. Muir Mackenzie; and very few lawyers could have shown better knowledge of building construction and all that appertains to building contracts than did that gentleman. Mr. Greenop had favoured them with many cases of great interest, and had also been the means of bringing the lawyer here, Mr. Brice, who had given them the benefit of his views. Mr. Blanco White suggested that building owners should have the Contract conditions explained to them. The architect, however, had quite enough to do without sitting down to explain the details of a building contract; in fact, he would not wish to do it. With regard to sub-contractors, Mr. James Walter Smith, in his book on "Laws concerning the Owner, the Builder, and the Architect," laid down the following rule—Mr. Harrison perhaps would tell them whether it was law or not—"An equitable assignment in favour of the person to whom it is to be paid, and binding funds in the owner's hands when due, does not require the assent of the owner." Thus with the assent of the general contractor the owner is empowered to pay the sub-contractor direct. The Institute Conditions of Contract failed in this important respect with regard to sub-contractors, that it contained no clause which gave the architect power to withhold payment to the general contractor until he had seen the receipt of the sub-contractor. Mr. Saxon Snell in his particular Conditions of Contract made it clear that he would not pay the general contractor until he was assured that the sub-contractor had been paid. But in the Institute Conditions there was no power to do this. That was a matter they were now dealing with, and he hoped it would be found fairly dealt with in the revised Conditions. Mr. Harrison had referred to a very bad building, and everyone would agree that that was a monstrous case. In the case of *Crittall* v. *The L.C.C.* the general contractor failed before payment was made to the sub-contractor although the general contractor had received the money. The sub-contractor sued the "owner," the London County Council, and recovered, and it was against that great risk that architects had now to devote themselves. In his own practice, he required the receipt of the sub-contractor before certifying for the general contractor. With regard to the case quoted by Mr. Harrison where the architect accepted a tender for iron-work, in that case the tender was accepted before the contract was entered into by the general contractor, and therefore it was differentiated from the usual practice where the estimates or tenders of the sub-contractors are included in the general contractor's contract at the time when that contract was made up. With regard to "agency," that aspect had been discussed over and over again: how far could an architect pledge the credit of his client as an agent? How far was he empowered to add to the amount of the contract by additions for which he had not got the previous consent of his client? In his opinion—he had put the point several times before and had not had a reply; he put it now because Mr. Harrison or Mr. Blanco White might answer—in his opinion, the architect, as agent of the client, was empowered to order extras to any extent so long as those extras were not detrimental to the building itself and were within the lines of the contract. That was the position he took up, and he should like to know if it was correct or not. Sometimes he was told it was, and at other times that it was not. There were many architects in the room who, in the course of their practice, ordered considerabl additions to the work without the assent of the client, and trusted to their "agency." Both Mr. Harrison and Mr. Saxon Snell had referred to the question of the arbitrator. If he were a contractor, he would not under any circumstances sign a contract, whether he knew the architect or not, where the architect himself was left as sole arbitrator—particularly if the arbitrator took out his own quantities! He knew he should be told that he had no right to call in question the *bona fides* of the architect; but human nature was human nature, and it was the desire of the architect very often to avoid going to his client and saying, "I have incurred £1,000 or £2,000 extras; I am very sorry, but that is the amount due to the contractor." He might say in conclusion that the Practice Committee and the Council of the Institute were now engaged, and had been for some time, in remodelling not only the Conditions of Contract which modern practice required should be revised, but also in that other important matter connected with the profession, namely, the Scale of Charges. He must thank Mr. W. Henry White, Mr. Greenop, and Mr. Saxon Snell for their papers; he was sure they would do a very great deal of good—first, because they had induced lawyers to come to the Meeting and give their views, and next because it

was necessary that every endeavour should be made to get rid of the ruinous litigations which now so frequently occur.

MR. J. DOUGLASS MATHEWS [*F.*] said he joined with the other speakers in thanking the three gentlemen for the trouble they had taken and for the great use their Papers would be to them. He differed from Mr. Atkin-Berry when he said there were "no newer responsibilities." The question was what is new, and how long it has been in existence. When one contrasted an architect's duties and his position now with what they were forty or fifty years ago, he could not help saying that there were many newer responsibilities which operated most seriously in the practice of architects.

MR. ATKIN-BERRY: I did not say there were no newer responsibilities; I said that in these Papers there were none.

MR. MATHEWS: Contrast the architect in former days, the friend and confidant of his employer, and looked up to with confidence by the builder. In those days builders were all practical men, and, for their own sakes and their reputation, they did the best work; and there was nothing like the amount of supervision by the architect required in those days. Yet they were fully up to their responsibilities, and both builder and client had sufficient respect and confidence in the architect to carry out his wishes. Things have changed now! Instance the builders: many were exceedingly good organisers, but were not all practical men, and therefore the architect was often turned over to managers and foremen, and to artisans and labourers, into whose hands was entrusted the important task of carrying out the building. Great responsibility was thrown upon the architect, who was practically at the mercy of men who took little interest in their work and were little more than machines: as so much work was done by machinery the workman comparatively had little to do except to make up for the deficiencies of machine-work. Naturally, men did not now take such interest in their work as when they had it in their own hands. This was serious for architects, because through this want of interest in the work so many of the deficiencies occurred for which the architect was supposed to be responsible. Again in former days, in some parts of England, each trade carried on its respective work. But now the general contractor was responsible for all the work done in the building, and the result was that, with new appliances and inventions, they were obliged to have a class of tradesmen which in former days did not exist. Hence difficulties arose between the general contractor and sub-contractors. These difficulties had to be met, and involved the architect in much trouble and responsibility. Again, the clerk of works was supposed to represent the architect. It might be that he was employed by the employer and paid by him, but in nine cases out of ten he was looked upon as the architect's representative at the building. Many clerks of the works were excellent men, who threw their heart and soul into their work. Some, however, had been found to be too great friends of the builder's foreman, and therefore the clerk of works was accountable for much of the bad work and consequent trouble of the architect; and it necessitated more supervision, as, if he could not trust the man who was supposed to be his representative, a great deal of anxiety was the result. With regard to the position of the architect as arbitrator (perhaps the word was not quite what was wanted), if he had not the confidence of the employer and the builder, it was serious for both, and it meant that they must go outside to arbitrate upon every little difficulty arising between the builder and the architect, and much inconvenience, delay, and loss would be caused to everybody concerned. But things did not stop there. In our Conditions of Contract provision was made for arbitration by our own body, and therefore matters arising therefrom could be taken up without the necessity in most cases of having recourse to the Law Courts. If another term could be used when the architect was employed in that function between the employer and employed, it would be well, as he should be looked upon as a man of strict integrity and trusted by both parties. The more they could advocate this method, the better it would be for all parties. With regard to the matter which concerned them most of all—namely the position of the architect in giving his final certificate and so freeing the contractor from all responsibility—he could not understand it. A contractor undertook to carry out all things described in the quantities, specifications and drawings, and conditions. If he or some of his employees did not carry these out, and trouble ensued, whether in twelve months or two or three years afterwards, the employer might ask the architect why he had allowed this, that, or the other to be done. It is obvious that he could not see to every trifling thing, and perhaps a small matter in the first instance would become a very large one, and it was not reasonable that the architect should have to stand in the place of the contractor, for the latter was the man who had caused the damage and was responsible for it. What they wanted was that the architect was not to be held responsible for work of that kind. They knew he had responsibilities, and that he must carry them out, but to make him responsible for other people's bad workmanship and carelessness was a serious matter, and the sooner they got that settled the better. With regard to the sad case of *Lanning* v. *Davey and Salter*, he was never engaged in any case which was more painful. The client there deliberately, after he had had his house erected, went to an architect and put into his hands a specification and drawings and instructed him to go through the house and take a note of everything that was not in accordance with one or the other. The result was that he produced a consider-

able number of items, most of them absurd and trifling. That case, unfortunately, was brought into Court before a common jury, who appeared to be led by one of their number who had some smattering of building knowledge, though very little, and practically he carried the day. The Judge saw that there were accusations made about the drainage and other things that were too serious for him to pass, and therefore he requested that a number of the jury should go and see the house and make their report. They came back and made their report, which was to the effect that the architect was to blame. The case was then taken to the Court of Appeal, and that Court decided in the architect's favour, and a new trial was ordered. The plaintiff, who was an impecunious man, had the question put to him by counsel: In the event of your losing this case, what means have you to pay the costs? The answer was, None whatever. The result was that the architects gained the day, but it was a very serious loss to them. The man knew he could not pay the costs, and not only anxiety but pecuniary loss fell upon them. That might happen to any one of them. Architects were ready to bear their responsibilities, but objected to being made responsible for things over which they had no control.

Mr. R. G. LOVELL [*A.*] said that the question was a very involved one, but for himself, who had practised principally abroad, it seemed even more involved than it probably did to others present. The customs abroad were frequently entirely different from those which prevailed here. At the recent International Congress at Rome there were references to this matter which were interesting. In France, sub-contracting frequently disappeared entirely, because the contracts were let separately to each trade. In Italy the architect sometimes appeared almost to become the contractor inasmuch as he gave a price for the completed building. Of course he was not speaking of big monumental work. In Spain and in South America generally, where he had had much to do, the custom usually was to have two architects. One was the architect for the contractor, who did the bulk of the work. The other was the architect for the building owner. In view of what he had heard that evening his opinion was that it was exceedingly difficult to determine that an architect could be anything more than an agent for the building owner. The trouble of the architect's responsibility appeared to depend to a very great extent on the clerk of the works, and he could not help feeling that if architects were to put young men of their own office to do the work of the clerk of works they would have a better class of man controlling the foremen, and they would be educating their young architects and giving them experience in a sphere which would afterwards be exceedingly useful to them.

Mr. H. D. SEARLES-WOOD [*F.*], referring to Mr. Saxon Snell's Paper, said he thought it a great advantage that he should come before them with a paper on these lines, for he had thrown a very useful light upon this subject. Speaking as architects, he thought it should not go out to the general public that they were trying to safeguard themselves too much. The responsibilities referred to were their clients' responsibilities as well as their own, and that was the light in which they should like the public to view these discussions. What they wanted to know was what were their responsibilities as far as their clients were concerned. They had got Counsel's opinion on the liability of the contractor and the architect respectively, and it might be useful to state that now. He thought he was right in saying that Mr. Danckwerts had laid it down that the contractor's liability ceased at the date of the final certificate, but that the architect's liability lasted, under the Statute of Limitations, for six years. That was the legal opinion they had obtained on that subject, and that was the point to emphasise in the discussion. They were trying to educate themselves into their position, and not to avoid their responsibilities and make the thing easier for themselves.

Mr. G. R. BLANCO WHITE, Barrister-at-law, said that three very interesting points had arisen since he last spoke. The first was the question raised by Mr. Woodward, as to how far the architect had authority to order variations. That could be looked at from two different points of view. First of all, there was the question if the architect ordered a contractor to carry out a variation, how far was the contractor obliged to do it? There the answer was the answer Mr. Woodward gave. If that variation was detrimental to the building, the contractor was not obliged to obey the architect. But that was an idiotic answer. In practice he did not see how the contractor could be expected to say whether any particular order was detrimental to the building or not. But there was a decision, *R.* v. *Peto*, in a very high Court, which laid that down. Under the Institute Contract the architect had only power to order additions or omissions, and the case showed that those words did not include deviations. The way out of that was to insert in the contract the words "and deviations." But when that was not done, at the present time the contractor was not relieved from liability for fault just because the architect had ordered it if it was clear that it was to the detriment of the building when the architect was ordering it. If it was clear that the architect was ordering worse material than that specified, the contractor was not at present relieved from his liability. But there was the second question, What was the architect's position with regard to the building owner if the architect ordered variations without first consulting the building owner? If a building owner said to the architect, "I want to build such and such a house; draw me the plans," and when the building

owner got the plans of the house and said to the architect, " I like these plans, now set to work and get the house built," the orders to the architect were to get that house built, and if the architect varied the building without consulting the building owner, and got the house built in any respect different, he was wrong. The strict position of the architect was seldom brought home to him. But if his orders were from the building owner, whose orders were to build a particular house, he had no right to change, even if it seemed to be necessary. Although that was idiotic, the only way out was that every architect, when he had seen his client at the beginning of the job, should say, " Of course these plans are provisional, and as we go on I might find it necessary to alter the building in some respects." If he guarded himself in that way he was safe. But if he simply took orders to build according to the plans, he had no right to vary, or if he did vary he could be sued in a court of law, and could be made to put the building back into the position required by the original instructions. So he must either say what was just suggested at the beginning, or write a letter when he was sending the plans, saying that the plans might have to be changed from time to time as the work proceeded. Without that, he had no authority to vary. The second point was, that Mr. Harrison quoted from the law report in *The Times* the case in which an architect instructed the contractor to accept the tender of a sub-contractor, and in which the owner was held liable to pay the sub-contractor. Of course that must depend wholly on the wording, first of all of the architect's letter to the contractor, and secondly of his letter to the sub-contractor; and further to the acceptance by the contractor of the sub-contractor's tender. If the contractor wrote to the sub-contractor saying he accepted his tender dated such and such a day, it was clear that he accepted it on his own behalf and not on behalf of anyone else. But if the contractor wrote saying that he accepted on behalf of the building owner, by tender of such a date, he would be purporting to make the owner liable. And the question would arise as to what the request for the tender was like which was written by the architect. If that request for a tender were in carefully guarded terms like " Kindly give a tender for the work for the contractor "—which it was not in this case, because in that the sub-contractor did not know who the contractor was—it would be clear that the intention of the architect was that the contract should be made with the contractor. But if the architect wrote in ambiguous terms asking for a contract, and accepted the tender in ambiguous terms, it was for the Judge or the jury to determine whom the contract was made with. The lesson from that was, first, that architects in asking for a tender should put in the words " work for the contractor," to make it clear that the work was for the contractor, and not for the building owner. And secondly, the contractor should accept sub-contracts on a form which had been drawn up beforehand, which said, " I accept "; not " I accept on behalf of " whoever the building owner was. If the architect took care, or the contractor took care, there could be no danger of the building owner being made liable. But if the architect and the contractor were careless in their wording, they would end up by making a contract on behalf of the building owner. There was a third point—viz. that touching the question of how far the architect was liable for an action for negligence, and how far he was acting, as he was in some cases, as a quasi-arbitrator. That was a question of the wording of the form of contract. In so far as the architect was agent for the building owner, it was only just that he should be liable for an action for negligence if he was told to do something and he did not do it properly. Somebody had to be liable, and if it was his fault he should be liable. But if he was acting in a judicial position between the building owner and the contractor, since he had to exercise his opinion fairly between these two people, and as a man could not be expected to act fairly always if he was liable to an action by one of the fighting parties and not to an action by the other, and if his client could threaten him and the other party could not—when he was acting in a judicial position he should not be liable to an action. And that was so; in so far as he was arbitrator, in so far as he was in a judicial position, it was clear he was not liable to an action. So far as he was an agent, he was liable. But the difficulty had always seemed to him to be this: if a man was acting as agent and arbitrator at the same time, what then? It was conceivable a man might be hired by another to act in a judicial position, and if he acted carelessly so that his employer suffered damage, had the employer an action? It came back to the same solution as in those other questions; it depended on the wording of the form of contract. For instance, if the wording were " That the architect shall honestly decide such and such a point, and his decision shall bind all parties for the purposes until such decision shall be varied by arbitration as hereinafter mentioned," or something like that, in such a case as that, where the words " He shall honestly decide " were put in, it was clear he was in a judicial position. So long as he acted honestly he was liable to no action from anybody. Hence it was a question of wording. And the conclusion to be drawn from all this was, that, until this revised form of contract was issued, the prudent architect, though he would continue to use this form, should, if he found himself with a couple of hours to spare, read through the conditions with extreme care and satisfy himself that he approved of it. And if there was a condition which he did not approve of, it was better

for him to change it in accordance with his own opinion, and to stick to it, and not to believe, because a thing was in the form issued by the Institute, that therefore it was perfect. He should make up his mind and stick to the idea, and change the form to his idea. He might change clause 12, for instance, with advantage.

Mr. ALAN E. MUNBY, M.A. Cantab. [*A.*], said that notwithstanding the legal decision he did not agree with Mr. Harrison with regard to the liability in the particular case he referred to; and the legal gentlemen who had spoken did not seem to realise the position with respect to sub-contractors. How could the architect arrange everything after he had got his contract? In the case cited, that of getting tenders for steel, surely the ordinary course was followed. Presumably most architects would get tenders from different firms of repute, and put the name of the lowest tenderer into the contract, but that did not make any contract with the architect or his employer. The architect promised that the sub-contractor's name should go into the specification; it did not bind him to the sub-contractor's being employed or to any kind of payment. Most architects used some kind of form in connexion with sub-contractors, and that was absolutely essential. But the difficulty he himself had found was that although one could draw a form which would bind the sub-contractor, that form was not always acceptable to both the sub-contractor and builder. The builder would produce his own form, and a wrangling would ensue between the builder and the sub-contractor. It was very desirable, before the present meeting closed, that they should have some statement of how far their liabilities in connexion with sub-contractors went. He hoped the legal gentlemen present would tell them something more. If any of these responsibilities were to come back directly on the architect, they were serious matters which might involve amounts greater than those for the work which the contractor himself was doing.

Mr. G. ERNEST NIELD [*F.*] said he thought it was a mistake to make alterations in the printed form of contract as issued by the Institute. He always found that the contractor was prepared to accept it as it stood, and any alterations were viewed with suspicion. With regard to the case of *Crittall* v. *The London County Council*, it seemed to him that the difficulty might be obviated if architects followed what he believed was the usual practice, viz., to get the contractor to take over all liability for the payments to sub-contractors before commencing the work. He thought the latter might very well be safeguarded by insisting upon the production of the receipted accounts before issuing the final certificate. Mr. Woodward said these receipts could not be legally demanded, and he had known instances where the contractor would not state if the obligation had been discharged. A communication to the sub-contractor would clear up the doubt, and he had found that the withholding of the final certificate facilitated settlement. In considering the form of contract it should be remembered that it went far beyond the Institute and was used by almost all architects. He knew of one particular case in which it was used which resulted in a fairly long arbitration, and it bore the test very well. The case he referred to was an illustration of what Mr. Douglass Mathews said as to the present-day contractor; in the arbitration in question it was shown that the contractor entered into a contract for £5,300 when he had a bank balance of only £1. The architect had never been an architect before, but had been a builder's draughtsman. Fraud was alleged against the architect, and he quickly disappeared and left the country. The builders' creditors fought the case but never took up the award.

Mr. DOUGLAS WOOD [*A.*] asked whether it was a fact that the builder's responsibility ceased when the final certificate was issued, but that the architect's responsibility continued for a period of six years? He did not think that was a fair arrangement. No architect wished to avoid responsibility for which he ought to be liable. But he did not think any other professional man would be so foolish as to accept a responsibility for which he was not justly liable.

Mr. MATT. GARBUTT [*F.*] said that in some other professions one occasionally heard that practitioners should exercise "reasonable skill and care." It appeared from what their legal friends told them that the architect was a very superior mortal indeed; he was supposed to be absolutely infallible in all matters relating to his profession: that was a "reasonable" thing for him apparently. It seemed to him that the position was something like this. A man appointed an architect as his agent; and that architect was supposed to know absolutely and precisely the nature of every particle of sand and of all other material used in the building; and no matter how big the building, the architect was to be at every spot all the time, and personally see to the carrying out of everything. That was a plain and simple liability, which by analogy might be carried still further. The householder no longer hung round his garden all night with a shot-gun to protect his own house, but he contributed towards the expense of a policeman for the purpose. The logical sequence would seem to be, that if a man's house was burgled the policeman should be "put away" for at least six years!

Mr. MAX CLARKE [*F.*] said he much regretted that he had not had the pleasure of hearing Mr. White's Paper or Mr. Greenop's. But he had read them, and found them full of interesting information. But life was too short to take the subjects so seriously as the authors had taken them. Mr. Snell he was very much obliged to, for he had given

them something lighter, something which could be more easily digested. With regard to the case of *Lanning* v. *Davey*, he had heard the arguments in both the Courts, and had heard the jury when they came back from their inspection of the drains. The unfortunate architects in that case were mulcted all round. The defects were reduced to six items, but he did not think any one of them would have been upheld by a Judge. With regard to sub-contracts, he thought it was possible for the architect to guard himself and his client by putting in a clause that he was to see the receipts for the payments to the sub-contractors. That was his own practice, and he always got the receipts, and there was no difficulty about the matter whatever. With regard to the case of the Leicester Board of Guardians, he saw the drawing which was made by Mr. Trollope, and he saw another drawing of the way that the work was carried out. The two arrangements were so very dissimilar that he was astonished that Mr. Trollope did not see at any one of his visits the difference or variation. But he was informed that Mr. Trollope admitted that he did not see any one of the floors at any of his visits. Considering that it was a large item and a very great responsibility, as well as a somewhat new system of construction, he thought he might have seen it. Such was his opinion with regard to that matter. He would suggest for the title of the Papers "The Greater Difficulties in the carrying out of the Architects' Duties," because, after all, their responsibilities were much the same; but the complexity of building nowadays, compared with what it was thirty or forty years ago, had increased enormously; not only in the number of sub-contractors, but in the intricacies of the buildings. Of course, when it was a question of simple bricks and stone and wood it was a comparatively easy matter; one knew that fairly good timber and fairly good bricks were obtainable; construction was simple, and matters all round were easy for the architect. Nowadays bricks were bad, as a rule; Portland cement was too hot as a rule, unless it was well looked after; steel, unless they looked after it, would be found to have come from Belgium, and everything required careful and personal supervision. The moral of it all was that the architect ought to undertake only a quarter of the amount of work that he did, pay four times the amount of attention to his job that he did, and he ought to be satisfied with the proceeds. And he ought to ask his client to allow him four times the amount of time to carry out the work. But those things he feared would not be done. Every man should alter the form of contract with regard to employers' liability and workmen's compensation to cover the present liability. Those who did not do that left themselves open to a loophole, because the form of contract in that particular respect was not brought up to date. He had had the privilege lately of seeing a very eminent Counsel's opinion upon giving an order or getting an estimate from a man whom they called a sub-contractor; and it was to the effect that if this estimate was made out in the name of the architect or in the name of the employer in the first instance, either of these parties was liable to pay the money, and that it was necessary that the architect should get an estimate made out to the contractor—he might get it made out at any date he liked—and that this should be sent to the contractor, and that the contractor should be asked to accept it. Of course, he realised that it depended on the terms of the acceptance. But those were the things the architect had to look after; and if he did not look after them he must suffer for it. There were so many points that it was difficult to touch upon them all; but he thought they were making a great deal too much trouble for themselves with regard to the form of contract, and that they were not paying nearly enough attention to their buildings, and that if they talked less and did a little more they would be very much better off.

THE CHAIRMAN (MR. REGINALD BLOMFIELD, A.R.A.) said they had had a very instructive evening, though he himself was rather more confused than he was before. But they had talked it all over, and he had no doubt they should know a little better how to deal with their position in the arduous practice they had to conduct. There were three principal points which had been raised that evening: the sub-contractor, the position of the architect as agent or arbitrator, and the liability of the architect. The first was the question of the sub-contractor. He did not think he had much to say on that subject, except to mention what he did himself. He did not as a rule have sub-contractors; he had direct contracts for the special trades. The advantage of that was that he could deal with the man himself, and he saved for his client the profit which the general contractor charged on the sub-contract. On the question whether the architect was agent or arbitrator, he had travelled up that morning with a distinguished K.C., for whom he had acted—without a lawsuit—and he asked him what the position was. He said: "You are both, because during the work you are agent, and when you come to issue your final certificate you are, so far, arbitrator." Many of their difficulties came from the mixing up of the two positions. He had no suggestion to offer as to how they were to deal with it, except to watch the position at each point in the progress of their work. The last and the most crucial point was that people were saddling the architect with all sorts of responsibilities which were never dreamt of even when he began practice some thirty years ago. Mr. Douglass Mathews pointed that out, and what he said was, he believed, absolutely the fact. Builders had altered, and clients, he regretted to say, had altered to some extent, and there was

not always that confidence that there should be as between architect, client, and builder. It should be three people working together for one object, namely, the production of a fine building that should also answer its purpose. But conditions of practice nowadays were so complicated, and they had to know so much and control so many things, that the architect's position was becoming difficult; and architects were themselves sometimes to blame, for there had been cases in which they had not always discharged their responsibilities to their clients in regard to complete provision of specifications and drawings, and to superintendence of the work. These points they could attend to and put right, and he did not think there was any man among them who would wish to repudiate his legitimate responsibilities. If he specified a joist which was insufficient for its purpose, and the structure collapsed, he should expect to pay for it, and he did not know any architect who would not do it without demur. But they resented having to pay for things they could not possibly control, and their responsibilities to their clients ought to be more clearly defined and more generally understood. There were two things which they, on their part, in the discharge of their duties to their clients, must attend to more carefully. As Mr. Harrison said, they must attend to their business closely. That was the first point. The other was that they must try to keep up a high standard of professional attainment among themselves.

Mr. SAXON SNELL and Mr. W. HENRY WHITE briefly acknowledged the vote of thanks, and excused themselves from replying at length owing to the lateness of the hour, Mr. Snell observing that if the Papers had only brought forward this interesting discussion, he was sure Mr. White and Mr. Greenop would agree with him that it had repaid them for all their trouble.

Mr. GREENOP, in responding, said: I am in a little difficulty. It is four months since these Papers were read and since the criticisms of Mr. Brice and Mr. Blanco White, and during those four months the Papers have circulated all over the country. Most of their observations are adverse criticisms of my deductions from these cases, and I am in the unfortunate position of being entirely at variance with them on nearly every point, with no opportunity of discussion. This is the first time I have had the pleasure of seeing Mr. Harrison, although I have at my office a collection of communications from him accumulated during twelve or fourteen years. At the time I was Hon. Secretary of the Practice Committee it was my pleasant duty to communicate with Mr. Harrison and get his valuable advice on legal points, and you may take it from me—and I say it as a compliment to Mr. Harrison—that he is a lawyer from the crown of his head to the sole of his foot, and that he looks at everything strictly from the legal point of view. So much is that so that there is one reply that I had from Mr. Harrison, relating to the case of *Robins* v. *Goddard*, which will always remain upon my memory. When the Practice Committee took up this matter of *Robins* v. *Goddard*, largely upon the sequel case of *Goddard* v. *Ferguson*, I had to write to Mr. Harrison and put this question: "Here is the case: do you advise an alteration of the Institute form of contract to protect the architect; and if so, what form do you suggest it should take?" This was Mr. Harrison's reply: "Dear Sir,—'The Judgment in this case was logical, inevitable, and correct.' Yours truly." But it did not help us out of the difficulty. I assure Mr. Atkin-Berry that I have not drawn deductions from the words of the judgments without considering the whole facts. I have considered the evidence in all the cases, and I say that Mr. Brice, whom I greatly respect, and Mr. Blanco White have not had that opportunity, otherwise they would not have offered the criticisms they did on the last occasion. Take one expression of Mr. Brice's. He says that in the case of *Roberts* v. *Hickman* there was held to be fraud and collusion between the architect and the building owner, and this of course vitiates any contract and any certificate; therefore that that case did not over-ride or reverse *Robins* v. *Goddard*. The Judges distinctly said there was not fraud or collusion. Mr. Brice starts by saying that my difficulty arises from the fact that there had been some confusion between the interim certificate and the conclusive certificate. I know what Mr. Brice refers to, I know what his authority is for saying there is a difference in value and character between the first and the final certificates. It arises from a misunderstanding, a deduction by writers of text-books from inapplicable cases which is repeated again and again, and there is no foundation for it in law. Again Mr. Brice says, correcting me, the Statute of Limitations does not run from the date of the work, but from the date on which the fraud or defective work might reasonably have been discovered. What becomes then of the dictum we have heard here to-night, that the architect's liabilities are over in six years? They are not, because the defect might not be discovered for ten years after the contract was finished. Then again in the case of Crittall there is scarcely a speaker who understands it. I have had a complete account of the case from the Managing Director of the Crittall Co. since I read the Paper; and not only did he describe the facts, but there is a verbatim report of the judgment which I have here. It is an ordinary case. The architect invited an estimate from Crittall, put the sum in the quantities, and later instructed the contractor, Lawrence, to accept the estimate which Crittall gave on such and such a date, and Lawrence did it. As the Judge said, it is foolish; but we are doing it every day. He said there must be an offer on the part of A, and an acceptance by B. Crittall had never given an estimate to the contractor, and

therefore there was no contract between them. I note Mr. Blanco White differs from Mr. Brice as to there being a difference between the progress certificate and the final certificate. With regard to the case of *Lanning* v. *Davey and Salter*, since I read my Paper I have had one of the saddest letters a man can receive from Mr. Salter, the surviving partner. The words I have used in my Paper are none too strong to express the gross injustice of the case. Finally as to the relation between *Robins* v. *Goddard* and *Roberts* v. *Hickman*, I have been challenged on all sides because I affirmed the latter reversed the former. In both cases the point the Court had to decide was: Is an architect in giving a certificate an agent or an arbitrator? In both cases the client said to the architect, you are merely my agent or mouthpiece, you shall not issue that certificate. The motives in the two cases differed, but the attitude of the client was identical. In the former case the architect replied, "I am an arbitrator between you and the builder in this matter and shall act accordingly." In the latter case the architect sat on the fence against his convictions. In the latter case the House of Lords unanimously decided that the architect in issuing certificates is an arbitrator and fails in his duty unless he so acts. The judgments, of which I read extracts, laid down a general rule, not one applying only to the case in question. In *Robins* v. *Goddard* and *Goddard* v. *Ferguson*, its sequel, the architect was held to be an agent only, since as an arbitrator he would have been immune from the action for damages for negligence which was successfully brought against him. I maintain therefore that *Roberts* v. *Hickman* entirely reverses the position established by *Robins* v. *Goddard* and *Goddard* v. *Ferguson*. The details of the cases differed, but the principle fought for was identical.

Mr. JOHN E. YERBURY [*Licentiate*] writes:—Mr. W. Henry White remarked in his Paper that "Only in the gloom of the Law Courts one realises the really material points in a case," and as an instance quoted a recent case, in which instructions by a client to an architect not to issue further certificates were held to be not sufficient to justify an architect in withholding them. Surely the gloom of the Court ought not to have been necessary. What use for Clause 30 of the Institute Contract Form if it were sufficient? Mr. White suggests that the Practice Committee might be set the task of developing a scheme to provide for arbitration in building contracts, so that no action at law could be brought until an award had been made by an arbitrator. I am inclined to think this a good suggestion, but am afraid the only practical method of carrying out the idea would be the appointment of official arbitrators by the R.I.B.A., and other local affiliated societies, in conjunction with the Institute of Builders, the Surveyors' Institution, and other interested Societies (such as the Builders' Merchants, Timber Trades and other Trade Associations), with their salaries guaranteed by the Institute (by arrangement with the other Institutes and Associations concerned), who would devote their whole time to the cases sent for hearing to the R.I.B.A. The scale of charges would be fixed by a joint Committee of those interested, and the fees taken by the Societies in proportion to their guarantees. In those areas needing only one arbitrator the services of barristers-at-law and accountants would be engaged by the arbitrator when required—in certain large centres where several arbitrators would be needed, the exclusive services of a barrister and an accountant might be retained by the Board of Arbitrators.

I think Mr. White is justified in the statement that architects have as a rule no definite business training. But it is not this alone which has landed so many architects into difficulties; it is the acceptance of the Institute Form of Contract because it is the Institute Form (and agreed to by the contractors' representative associations), without fully appreciating the responsibilities of the position they are placed in by its clauses, which has led many an architect of business ability into difficulties he would have avoided but for the fact that the Contract Form was an agreed form and generally accepted on that account.

With regard to Mr. White's remarks upon the changed conditions of building, and contractors' methods of sub-letting the work while running their business from counting-houses, it may be said that there are any number of firms who are prepared to carry out any ordinary building contract without sub-letting, and it seems to me that in many cases the sub-letting is forced upon the contractor by the architect, sometimes to the extent of half the value of the contract. Even in the cases where the "counting-house" firm undertakes a contract I do not see where "heads I win, tails you lose" comes in. If a firm undertakes to carry out a contract for £100,000, and then finds that it cannot obtain sub-contractors to carry out the work for less than £110,000, the "counting-house" firm loses £10,000, assuming that it is a financially sound concern; and if it is not, the fact that it is a counting-house firm does not really matter much.

If two-thirds of an architect's specification is taken up with provisional amounts to be provided by nominees of the architect, the counting-house firm is the one which can satisfactorily carry out the work by going to a first-class firm of contractors for the general building work and superintending the whole.

I do not agree with Mr. White that the counting-house system throws more work upon the architect; my experience is that when special work is required

the sub-contractor specialist generally saves the architect a good deal of work, and the counting-house firm of good standing can deal with it as efficiently as the more usual contractor. But, as a matter of fact, has not Mr. White rather exaggerated the importance of this type of contractor? There are comparatively few of such firms, and the old-established firms of contractors are in no fear of death in London. In any case, as Mr. White truly says, "facts must be faced," and the all-important consideration for the majority of architects is that they should learn to write specifications as well as they can design buildings, and limit the provisional amounts in their contracts as far as possible, or accept the responsibility for ordering and payment by the client.

There is much force in what Mr. White says with regard to the hustling methods; but in many cases months are wasted which might be utilised by the architect if the client were warned at once that it would be impossible to develop a scheme unless a stated definite time were allowed, in which case preliminary drawings might be made while necessary legal documents and other long negotiations were being carried through.

The suggestion made by Mr. White that quantities should form part of the contract in order to avoid the difficulties occasioned by variations does not, I think, meet the case, because it would make it impossible for the architect to carry out the very sound advice given in the preceding paragraph of Mr. White's paper, viz. that the client should be kept informed as to his approximate liabilities on the contract, which could only be ascertained at completion. It is not necessary at the present moment to enter into the arguments for and against making the quantities a part of the contract, but it seems to me that the simple method, which I have myself always used, of keeping special order forms for "omissions and additions" and for priced "extras," together with a notice on certificates of the amount of extras at the date the certificate is given, keeps the client sufficiently informed, and is a reminder from time to time to architect and builder.

I am in entire agreement with Mr. White as to the duty of the Institute in legal proceedings which benefit the whole profession. I think the Institute should pay the costs of its members in fighting such cases, or such part of the costs as the Finance Committee should sanction.

I have expressed my views (for what they are worth after many years' experience of the Law Courts and arbitrations) in the January issue of the JOURNAL [p. 185] upon the question of the architect's position and certain necessary changes which appear to be needed in order to protect the architect at least to a reasonable extent, as every other profession is protected.

Mr. Greenop in his Paper states that "allegations of negligence may be considered as the most promising card to play when it is desired, from any cause, to avoid payment of an architect's fee"; but it is obvious that, however anxious to avoid payment, a client could not charge negligence unless he could show damage occasioned by such alleged negligence. Mr. Greenop says that the case of *David Lewis Trust and Levy* v. *Graham* turns upon the vexed question of supervision; but does it? It seems to me it turns upon the specification. Was proper ventilation specified? It is evident it was not provided. If specified, the case turns on supervision, but if not (and from Mr. Greenop's note it seems that ducts were not provided through the corridor floor), the question is then not one of proper supervision, but negligence to make proper provision in the specification for the efficient carrying out of the work.

It is difficult to form an opinion upon the merits of the case of *Leicester Board of Guardians* v. *Trollope*, but had the floor been carried out as provided in the specification (assuming it to have been proved that rot was caused by wooden pegs being left in), there would have been no cause of action; and it seems to me that the action should have been against the builders; unless the architect (or the clerk of works as his client's agent) consented to the variation. If I am right, the architect could, I think, recover from the builder. I take it that Mr. Justice Channell's expression of opinion, that "the laying of the floor was not a detail which could justifiably be left to the clerk of works," meant that the method of laying the floor could not be left to the clerk of works, not the supervision, and Mr. Justice Channell expressed his opinion that the clients were not barred, by the expiration of two years from the date of the final certificate, from bringing an action against contractors.

I do not quite follow Mr. Greenop when he says a most important pronouncement was the decision of the Judge in *Robins* v. *Goddard* that the matters raised by the counterclaim did not come under the arbitration clause (Clause 32 Institute Contract). The counterclaim being for damages for delay, and failure to complete, and for making good defects, it appears quite clear that the client could not succeed without the architect's decision in his favour, although he could of course have taken the matter to arbitration upon the architect's refusal to act, or upon being dissatisfied with the architect's decision. What does appear to me to have been a most important pronouncement is that by Lord Justice Mathew in the Court of Appeal, viz. that "under the Institute Contract every dispute, whether arising during progress of work, or afterwards, was referable to arbitration under Clause 32." And the opinion expressed by the Court of Appeal that the architect's decision under Clause 17 was not conclusive as against the client suggests the desirability of some alteration in the wording of this clause. The client, having upset

the decision of the Court of first instance given in favour of the builder, brought an action for damages to the extent of his costs against the architect. The Official Referee decided the case against the architect; and this is the case of *Goddard* v. *Ferguson* which Mr. Greenop says left us in the gravest peril, and led the Practice Committee to make certain verbal alterations in Clause 30 to bring it into line with the decision of Mr. Justice Farwell in the Court of first instance in his judgment in the case of *Robins* v. *Goddard*.

Mr. Greenop very justly points out that this work of the Practice Committee is of very little value while Clause 32 remains, with the decision of the Court of Appeal in *Robins* v. *Goddard* as expressed by Lord Justice Mathew. But I am not so sure that Mr. Greenop is right in thinking that the House of Lords' decision in the case of *C. R. Roberts & Co.* v. *Hickman & Co.* is an entire reversal of the Court of Appeal decision in *Goddard* v. *Robins*. It is true that each of the Lords in his judgment laid great stress upon the duties of an architect as arbitrator, in a case where they had come to the conclusion that the architect had been guilty of fraudulent collusion with the client; but surely it does not follow from this that Lord Justice Mathew's decision with regard to Clause 32 has been upset.

The case of *Crittall Manufacturing Co.* v. *L.C.C.* ought I think to have been taken to the Appeal Court, and if necessary to the House of Lords: and I feel pretty certain that Mr. Justice Channell's decision would be reversed if Mr. Greenop sufficiently states the case in his Paper. Mr. Justice Channell's three reasons for his decision as quoted by Mr. Greenop would apply to the brick merchant, timber merchant, or any other person supplying material for the work. If, as is shown, the builder placed the order for goods, I presume his account was debited in the company's books, and the sub-contractors gave him credit under ordinary trade risks, and I see no reason for their being made preferential creditors under the bankruptcy of the builder. Clause 28 gives the architect power to order and pay direct, or through the builder, and having exercised his option he cannot go back upon his action: and surely the sub-contractor should either refuse the order from the builder, or be placed in the same position as other creditors.

With regard to ownership of drawings, it appears to me that the easiest method of settling this point is to introduce the matter in the Schedule of Charges by stating that the fees are for the use of drawings only.

I think it cannot be denied that Mr. Muir Mackenzie was quite right in saying in *Brown* v. *Meckel & Co.* that unless there is an agreement to pay the Institute Scale of Charges there is no implied obligation upon a client to pay the fees under the scale; and I think that the usual practice in the Courts (to recognise the scale as being fair and reasonable remuneration in most cases) is sufficient for the profession; although the recognition is given not on the grounds of custom, but on the ground that reasonable people agree to pay and accept such remuneration.

With regard to the payment of half fees for work not carried out, the case in which I was personally concerned is of interest. In *Yerbury* v. *Wortley*, upon the evidence of Mr. Horace Helsdon and Mr. Edgar Underwood, Mr. Justice A. T. Lawrence gave his award for half fees as fair and reasonable remuneration, or *quantum meruit*. This decision is the stronger because at that time I was not a member of the Institute, and counsel had made as much as possible of that fact. Mr. Helsdon was pressed to show how and why he considered $2\frac{1}{2}$ per cent., or half fees, a reasonable claim in this case, and divided the $2\frac{1}{2}$ per cent. as follows, viz.:—

Preliminary drawings . . .	1 per cent.
Conversion to working drawings (work which may be delegated to an assistant)	$\frac{1}{2}$ per cent.
Specification	1 per cent.

This was accepted by the Judge, and (although by an obvious misreading of Mr. Helsdon's evidence two Judges in the Court of Appeal reduced the remuneration) by Lord Justice Fletcher Moulton in the Court of Appeal, and the unanimous decision of the House of Lords, the Lord Chancellor and four Law Lords (Macnaghten, Atkinson, Collins, and Shaw) sitting.

It occurs to me that in setting out the scale of charges in the new Schedule, it would be well to include the above scale instead of $2\frac{1}{2}$ per cent., because it sets out the payment to be made, in the event of abandoned work, at convenient periods, in what appears to me to be an equitable manner.

Mr. A. M. Brice treats the clerk of the works as the agent of the architect. I do not think this is so. Surely he should be the agent of the building owner who pays him, and for whose benefit he is appointed: therefore his neglect should not penalise the architect. The clerk of the works is in quite a different position from the architect's ordinary staff, unless the architect appoints one of his staff.

Dealing with the case of *Robins* v. *Goddard*, Mr. Brice says: The architect was agent while issuing interim certificates; he became arbitrator when he gave the conclusive certificate. I am not quite clear what happened in the case, but the architect appears to have been dismissed as agent. If that dismissal was effective before the final certificate was due, surely he could never become arbitrator.

Mr. Blanco White says that under Clause 30 the architect when called upon to certify is an arbitrator —but Mr. Brice says that for interim certificates he is merely an agent. Which is the correct view?

I do not myself see any reason for regret in the

decision of the Court in the case of *Robins* v. *Goddard* (although I believe some do resent it). This decision only means that defective work must be made good even after the maintenance period under Clause 17 has expired. This, I think, is an advantage to the architect, as it will make contractors more careful than ever to know that the blessed phrase "the maintenance period has expired" does not relieve them of responsibility for bad work, although I agree with Mr. Greenop that Clause 32 needs alteration if the architect is to be, as Mr. Greenop wishes, immune from attack. I am, however, not at all sure that it is desirable that he should be; in fact, I rather incline to think that it is better that every matter of dispute should be open to arbitration.

Mr. Blanco White also calls attention to Clause 12 and the curious decision in the case of *R.* v. *Peto*, "extras or omissions do not cover alterations." It is difficult to see how the Court could have decided this to be the intention of the parties under the contract; but since the Court did so decide, it is time the Contract Form was altered to make it perfectly clear that the intention is to include alterations.

With reference to the authorisation of extras, I think this clause should be so drafted that a penalty should attach to the architect who neglects to send a written order for extras. Many thousands of pounds have been lost to builders who have feared to bring an action to recover payment for extra work because they have not received "written orders," although architects have admitted that the work was done upon instructions; yet the clients, insisting upon enforcing their rights under the contract for the production of written orders for all extras, have escaped payment.

Mr. GEORGE PARR [*Licentiate*] writes:—I have read with interest in the JOURNAL the reports of discussions at the Institute on the question of responsibilities of architects, more particularly as to their position in respect of provisional amounts inserted in the specification for payment to specialists or sub-contractors. Thinking it might interest some members to learn how I have recently endeavoured to meet the case by an alteration to clause 20 of the R.I.B.A. Contract, and obtaining an agreement from each sub-contractor, I enclose a copy of the clause as altered and of the agreement.

The contract is for a little over £21,000, and of this amount about one-third is for specialists' work for which provisional sums are inserted in the specification.

The contractor is a London man of standing, and the sub-contractors all of good repute, and there was no hesitation on any one's part in signing.

Beyond relieving the architect from responsibility to sub-contractors in the event of the failure of the contractor, the fact that the sub-contractors willingly sign the agreement is perhaps a better assurance than any other of the financial status of the contractor. On the other hand, should the sub-contractors refuse to sign, giving good reasons for their refusal, it enables the architect to make inquiries and perhaps avoid future complications.

Agreement above referred to.

Date.

To Messrs .....

GENTLEMEN,

Re Estimate for.....
..... at .....

In the event of.....estimate for above works meeting with your approval.....willing and hereby agree to enter forthwith into a Contract with the Building Contractor (.....) in accordance with the terms of clause 20 of ..... Contract, and upon receipt of.....order.....will commence, and with all proper expedition carry out the said works, it being understood that the amount of.....estimate (£) is included in..... Contract.

Any variation in the nature of the work or mode of carrying out same, made by you either before or during the execution thereof, shall not vitiate this Agreement, but any such variation, either by way of addition or omission, shall be calculated on the basis of the original estimate, and.....will supply you with the necessary details to enable you to check.....final account.

And.....further agree that the Building Contractor shall be.....employer, and that under no circumstances shall.....have or make any claim either monetary or otherwise upon yourselves or your clients in respect of any work done by.....
.....Gentlemen,

Yours obediently,

.....

Clause 20 *Building Contractors' Contract.*

All Specialists, Merchants, Tradesmen, or others executing any work or supplying any goods for which prime cost prices or provisional sums are included in the Specification, who may at any time be nominated, selected, or approved by the Architect, are hereby declared to be Sub-contractors, and the Contractor shall immediately upon signing the Contract enter into binding Contracts with the several Sub-contractors mentioned in the Specification as to time of delivery of goods, carrying out and completion of works specified and at amounts provided. No extension of time or extra payment shall be allowed or paid to Contractor on the ground of delay or otherwise by the Sub-contractors or their workmen; but no such Sub-contractor shall be employed upon the works against whom the Contractor shall make what the Architect considers reasonable objection, or will not enter into a contract with the Contractor upon terms and conditions consistent with those in this Contract and securing the due performance and maintenance of the work supplied or executed by such Sub-contractors and indemnifying the Contractor against any claims arising out of the mis-use by the Sub-contractor or his workmen of any scaffold erected or plant employed by the Contractor or that may be made against the Contractor in consequence of any act, omission, or default of the Sub-contractor, his Servants, or his Agents, and against any liability under the Workmen's Compensation Act 1897, or any amendment thereof.

THE NEWER RESPONSIBILITIES OF ARCHITECTS, AND THE CASE OF "MINTER *v.* WALDSTEIN."

By William Woodward [*F.*].

Read before the Royal Institute of British Architects, Monday, 3rd June 1912.

THIS case has provided so much food for thought on the part of client, architect, and builder, that the Professional Practice Committee of the Royal Institute thought a short paper upon it might be useful to us all; and I therefore present to you my impressions on this case, founded to a large extent upon the judgment of Mr. M. Muir Mackenzie.

Since I wrote this Paper, which I was prevented reading earlier as Professor Waldstein had commenced litigation with the architect—litigation which I am happy to say has now been settled out of Court—the Institute has had the benefit of listening to three excellent Papers on the subject of the Responsibilities of Architects: one from Mr. W. Henry White *; one from Mr. Edward Greenop,* and one from Mr. A. Saxon Snell,† all leading to interesting and useful discussion.

We have been told during the discussion on those Papers that there are no "newer" responsibilities of architects. But those of us who can date back to the latter half of the nineteenth century will agree with me that the position of client, architect, and builder, to-day, is altogether different from that existing, say, forty or fifty years ago. An architect was not then subject to anything like the interference in the performance of his duties which unfortunately now too frequently prevails. The client obtrudes his views as to what should and should not be done by the architect which he would not think at all proper or desirable in the case of the lawyer or the physician; but I venture to say that the responsibilities of the architect, to-day, are quite equal to those attaching to the two learned professions I have named above. If the physician prescribes wrongly, the patient dies, and there is an end of the matter; but if the poor architect designs a building wrongly, or some defect occurs which he could not possibly have foreseen, the evidence is above ground, very much alive, and not dead beneath the earth. The lawyer, too, at times may give wrong advice, but it would be a little difficult to bring it to the front so easily as would be the case of the architect. The modern tendency is, unfortunately, to drift into *litigation*, with all its attendant costs, troubles, and anxieties.

Responsibility in building operations is increased, too, very largely by reason of the "rush" attending work which used to take its leisurely and safe course, with corresponding satisfaction to all concerned. I see in a recent issue of the *Journal of the Incorporated Clerks of Works Association* the report of a discussion which was opened at the meeting of the Association by Mr. Joseph Davies, upon "The Hurry of Modern Building: Some of its Causes and Effects." Mr. Davies pointed out that the introduction of Portland cement and constructional steel work facilitated this hurry, and he attached considerable importance to the freeholder's exactions as tending to promote this hurry because the leaseholder desired to get into occupation of the new building as soon as possible, having in view the heavy ground-rent he was paying. Mr. Davies stated that clerks of works suffered also—that under this "rush" it was almost impossible at times to get work done approximately well; that often the position of a clerk of works is inverted, and he has to stand, whip in hand, insisting upon getting work done at all—not well, but "get it done." Mr. Aitchison said that the "hustle" of to-day does not tend to good workmanship or substantial work. Mr. Williams pointed out that "girders, &c., are fixed while the work is green. Joinery work is very often

* Journal R.I.B.A., 13th January 1912. † *Ante*, p. 537.

fixed while the surrounding work is in a moist state." Mr. Pitts said that in addition to the many other causes for "rushing" work, the "system of sub-letting was responsible more often than was generally suspected, and was, moreover, very difficult to prove while the work progresses." Mr. Denny said that "It is almost an impossibility to get as good work done under these exceptional conditions of day and night gangs, excessive overtime, and excessive staffs of workmen, as it is under normal conditions."

The above are the opinions of clerks of works, and those opinions are additionally valuable as to the mischief of hurry and scurry in building operations, because clerks of works are not so affected as clients, architects, and builders. The more serious results, however, of this regrettable modern necessity are that architect and builder are made responsible for defects which would not arise if a proper amount of time were allowed, first, for the studious preparation of the drawings and specifications, and, secondly, for an adequate time to build properly, allowing sufficient time between the trades for the work to approach some sort of dryness. When trouble does arise it is difficult to make Judges understand that very many tons of water are still in the walls and fire-resisting floors; that such water must get out somehow or other, and that it is not fair treatment to be compelled to go on with the plastering with walls and floors reeking with moisture, and, worse still, to have to fix well-seasoned joiners' work to wet plaster. It is difficult, too, to make Judges understand that the better seasoned the wood is, the worse is the effect of moisture upon it.

The trial of *Minter* v. *Waldstein* took place during the hottest summer experienced in England for many years; and I may be permitted to say that it would, in my opinion, be difficult to accord to Mr. Muir Mackenzie—the Official Referee who tried the case in the High Court of Justice—too much praise for the patience with which he listened to the exceedingly complicated points involved, and for the great grasp he showed of the highly technical matters raised in the case. His judgment occupies seventy-seven pages of closely-typed foolscap paper. and it took two and a half hours of rapid reading to deliver it. The trial lasted for thirty-nine consecutive days, commencing on 5th July and terminating on 18th August 1911, judgment being given on 20th October 1911. Counsel for the plaintiff were Mr. E. Lewis Thomas, K.C., and Mr. G. R. Blanco White; and Mr. Clavell Salter, K.C., and Mr. St. John Morrow were for the defendant. The plaintiff was the well-known builder of Putney, Mr. F. G. Minter; the defendant Professor Waldstein, of the University of Cambridge, his architect being Mr. F. W. Foster. The clerk of works was Mr. L. W. Green. The solicitors engaged in the case were Mr. T. Blanco White, for the plaintiff; and Messrs. Withers & Co., for the defendant. The architects who gave evidence for the plaintiff were Mr. F. W. Foster and Mr. Wm. Woodward; and Mr. H. T. A. Chidgey—the quantity surveyor—also gave evidence for the plaintiff. The architects who gave evidence for the defendant were Mr. John Murray, Sir Alexander Stenning, and Mr. E. B. I'Anson. The contract—which was in the form known as the "Institute Form"—was to make certain alterations and additions to a large country mansion in Cambridgeshire, named "Newton Hall." The total cost of the works, including many additions to the works included in the contract, amounted to the sum of about £21,000. The work was commenced in February 1910 and completed in September 1910, the defendant moving into the house a few days after 22nd September. (One month of this time was occupied in pulling down old premises.) Certificates, as usual, were given by the architect during the progress of the works, and on 20th January 1911 he issued a certificate for £2,750. On 7th February 1911 he gave a final certificate for £533, stating that the latter sum was the balance of the money due to the plaintiff, with the exception of £500, being the retention money under the contract, to provide for the making good of defects which might appear during the period of six months after the completion of the works.

The defendant, besides denying that he was liable to pay the sums last certified, pleaded

a counterclaim for damages and recovery of certain sums which he asserted were improperly included in progress certificates. Some 400 items were set forth by the defendant as those to which he objected; and the bill of variations on the contract prepared by the quantity surveyor, Mr. Stanbrough, occupied 327 pages. I mention these items to show that the trial had to take in a mass of evidence which otherwise could have been considerably reduced.

On 16th January 1911 the architect sent to the contractor a list of defects which had appeared in the work, including cracks in the partitions and ceilings, shrinkages of the woodwork, and defective painting. On 19th January 1911 the defendant's solicitors wrote to the architect asking him "not to give any further certificates of any kind pending an investigation," and on the same date wrote to the plaintiff that the defendant was "extremely dissatisfied with the position, and we are looking into the whole transaction. Meantime Professor Waldstein will make no payment either on account of the existing certificate or any further certificate which we have requested the architect not to give." On the same day another letter was written by the defendant's solicitors to the architect, asking him for various drawings and documents, including the bills of quantities, to "assist them in advising the defendant as to his position." This the architect, on the same day, refused to do, and added, "With regard to the issue of further certificates I am willing to accede to your request, unless the contractor forces me to do so under the terms of contract." On 20th January the plaintiff did obtain from the architect the further certificate for £2,750 above mentioned, which he forwarded to the defendant, demanding payment of £4,250, with a statement that he would wait till the following Wednesday (the 25th) before taking further action.

A writ was then issued for the £1,500, this being the amount of a certificate issued on 9th January, and on 18th January the defendant wrote to the plaintiff declining to meet his certificate, referring the plaintiff to the defendant's solicitors. On 1st February this £1,500 was paid to the plaintiff, and the costs of the writ were afterwards paid. On 6th February 1911 the writ in this action was issued for the £2,750 certified on 20th January. On the same day the defendant's solicitors wrote to the plaintiff's solicitors that the "defendant would claim that a considerable amount of work was not authorised by him directly or indirectly, and that a very considerable amount of the work was defective, and that the amount which the defendant would decline to pay under these two heads would exceed the amount certified by the architect and alleged to be due to the plaintiff."

On 9th February the architect wrote to the defendant that he had issued certificates to the contractor for sums amounting to £20,783 in all, leaving the sum of £500, which was the amount of the retention money, and that this balance "I consider amply covers us for any defects or reparations which we may call upon the contractor to put right."

On 10th February the defendant's solicitors wrote to the architect and to the plaintiff, stating, in effect, that the architect had on 20th January ceased to be architect under the contract.

On 6th March 1911 the defendant wrote that he had appointed Mr. John Murray to be the architect under the contract.

The defence was delivered on 23rd March 1911 denying indebtedness, and that "the architect had not power to give the certificate, his authority to do so having been revoked by the letter of 19th January," that "numerous variations had been made from the contract drawings and specifications by the plaintiff without defendant's authority," that "the work done and materials supplied under the contract, and in respect of the said extra works, are defective and unsuitable, and not in accordance with the terms of the contract," and that "the prices charged by the plaintiff for the prime cost items in the specification and the extra works are excessive."

On 28th June 1911 the plaintiff delivered his reply. He pleaded that "all variations

from the original work were by order of the defendant, or with the authorisation of the architect; that the plaintiff was only liable to make good defects, under Section 17 of the contract, on receiving notice, and that no such notice was given; that under the contract the measurement and valuation by Mr. Stanbrough of the additions and omissions was conclusive; and that a set-off of so much of the two sums of £533 and £500 (already mentioned) as may be necessary to make good shrinkages and defects in the work might be made." A counterclaim for payment of the balance was set up.

The above is, substantially, the history of the case down to the trial by Mr. M. Muir Mackenzie, and some important points, as affecting client, architect, and builder, are involved.

Dismissal of the Architect.—Mr. Muir Mackenzie finds that the authority of the architect to give the certificate dated 20th January 1911 had not been previously revoked; that the architect was, on that date, the architect for the purposes of the contract, and that he had authority to give the certificate. The defendant alleged that the letters of 19th January operated to determine the architect's employment and his authority to give a certificate after that date. Mr. Muir Mackenzie raises the question whether an architect can be effectively discharged from his office by the employer alone; and he quotes cases bearing on the point. It seems that the architect, being the one agreed upon between the parties—*i.e.* client and builder—cannot be discharged by the employer. The defendant placed reliance on Clause 3 of the contract, which provides for the nomination by the employer, subject to objection by the contractor, of a fresh architect in the event of the death of the one named in the contract, or his ceasing to be the architect for the purposes of the contract; but Mr. Muir Mackenzie decided that that clause did not operate. There is an important matter, however, involved in this decision of Mr. Muir Mackenzie's, and that is that an architect's certificate might not be justifiably held to include for work outside the work contemplated in the contract. But although he is not, to my mind, so clear as he usually is, I gather that he decides that "in regard to all extra work ordered, either under the contract or in circumstances which created in the defendant a liability to pay for it, the provisions of the contract as to payment were to be observed, *i.e.* that on the one side defendant was not until completion of the whole work liable to pay except on the interim certificates of the architect, and then only for the amount certified, and that on the other side the certificates were to include the price of all the work ordered as above mentioned." He therefore decided that the contention failed, which I presume means that in this particular case the architect *was* justified in issuing certificates for work which, although not specifically included in the contract, were executed with the cognisance of the employer, and were therefore subject to all the conditions of the contract.

Position of the Quantity Surveyor named in Clause 13 of the Contract.—This clause specifically names a surveyor who is to measure and value all authorised extras and omissions, and provides for a copy of the bills to be given to the contractor. Mr. Muir Mackenzie decides on this point that, where the particular surveyor named in the contract has measured and valued additions for which the defendant was liable, under the contract, or an omission properly authorised, then such measurement and valuation are decisive. There did not appear to be, to my mind, much ground for doubt on this Clause 13, but, as it is not infrequently the case that builders employ a surveyor to measure and value for them the variations on the contract, it is well to bear in mind that the ultimate decision on these matters rests with the surveyor named in the contract.

The Clerk of Works.—The authority to be exercised by a clerk of works on a building is a matter of importance to architects and builders. We must not run away with the idea that because some of us have never experienced any trouble as regards the position of the clerk of works on the building that therefore we never shall. The case of *Minter* v. *Waldstein* shows that we cannot be too careful in all matters relating to the contract, and

that lawyers and Judges put upon subjects, which we thought quite clear and simple, interpretations which may, and do, involve all parties in much trouble, anxiety, and cost.

The clerk of works in this particular case gave many orders and directions, probably by the architect's authority, which were obeyed, as usual, by the foreman of works. Mr. Muir Mackenzie decides that the clerk of works had no power or authority, of himself, to authorise or permit the contractor to disregard Clause 7 of the conditions of contract.

Clause 7 provides that all materials and workmanship shall be of the respective kinds described in the specification, and therefore the clerk of works has no power to deviate from this condition without the express orders of the architect, and then it is no doubt necessary that any such deviation shall be confirmed by the architect to the contractor in writing. Clause 11 of the contract states that the clerk of works shall be considered to act solely as inspector, and under the architect, and the contractor is to afford him every facility for examining the works and materials.

The Alleged Defects.—I think I may say that the most important part of this case was the alleged defects in materials and workmanship; and no doubt there were such defects in the building. Mr. Muir Mackenzie had to decide whether the architect and the clerk of works were, or the plaintiff was, responsible for such defects, and in what manner they were to be made good.

The defendant complained, amongst other things, of the timber in the floors and roofs: that it was not in accordance with the contract, but was inferior and deficient, to the detriment of the stability of the building; that the floors and partitions were constructed in violation of the contract, and were defective in strength and stability; that the joinery was bad; that the roof was bad, and made of bad materials, and was of inferior workmanship, and not as designed and specified; that the system of drainage was not laid as designed and specified, and was badly constructed with bad materials.

The evidence brought before Mr. Muir Mackenzie on these alleged defects was of the most contradictory character. Apart from the other evidence given, that of the architects giving evidence was in direct issue. I, for the plaintiff, stated that, with the exception of certain small items of defects in floor partition, and roof construction, for which in my opinion the plaintiff was not liable, the defects in the house were those which one expects to find in most new buildings; that these defects were, in this particular case, intensified by the wet season of 1910 (the year in which the work was done), and by the abnormal heat from the abnormal number of radiators which the defendant requested to abnormally warm his house. I further said that the defects due to the plaintiff under his contract could be all made good in a month, and at much less cost than the £500 which was retained in hand, in accordance with the contract, for the very purpose of meeting such defects.

Mr. John Murray, Sir Alexander Stenning, and Mr. E. B. I'Anson, for the defendant, stated that the defects were due to bad materials, bad construction, and bad workmanship, and in violation of the terms of the contract and of the specification; that no such making good as I had mentioned would be sufficient; and that the new building was in a dangerous condition, should be completely gutted, and the interior reconstructed with materials and workmanship in accordance with the contract and specification.

Mr. Foster, the architect of the building, gave evidence for the plaintiff.

On the completion of the building a list of defects was drawn up by the architect and forwarded to the plaintiff, who not only at once agreed to send down and make good such defects, but offered to go over the building again with the architect and add to the list any other defect which might be apparent. The plaintiff, however, was not allowed to proceed with the making good, and the action of *Minter* v. *Waldstein* was the result.

As regards the description for the timber, the specification was in the somewhat anti-

quated form which we all know. The timber was to be of "the very best description," and generally to be Memel, Riga, or Dantzic; sawn die square, free from shakes, large or loose knots, and to be thoroughly seasoned. The planks, deals, and battens were to be of Christiania yellow, and well-seasoned. The joists and rafters to be, as far as possible, foreign cut.

I stated in my evidence that I was not able to say where the timber came from, but that I had satisfied myself, by examination, that it was of the best quality, and as free as possible from defects. The evidence of the defendant's experts was to the effect that it was of very inferior quality and not obtained from the places specified.

On 30th March 1910 the architect wrote to the plaintiff calling his attention to the timber, stating that it was of inferior quality, and asking for its removal; but also stating that so long as the brand supplied was of good sound quality he would be satisfied; and, subsequent to this, no objection was made to any of the timber put in by the plaintiff.

Complaints have also been made by the defendant as to the *dimensions* of the timber, and also as to the *construction* of certain floors on the first story. The scantlings of joists had been altered, and the spacing-out of the joists was not as specified.

As regards the first floor joists, the plaintiff wrote to the architect on 29th March 1910 saying, "My foreman tells me that the clerk of works has instructed him to stretch the floor joists from 12 inches to 18 inches. Will you kindly look into this and see how it affects the span, and also if you consider the size of the joists specified will be strong enough for some of the spans we have to carry?"

The *construction* of the roofs may be said to have been entirely condemned by the defendant's witnesses. Spacing out of timbers, alterations in heightening certain portions of the roofs—under the distinct directions of the architect—and various other alleged defects were the subject of complaint on the part of the defendant. I stated in my evidence that the construction of the roofs was sound and sufficient.

Responsibility.—It is important now to consider upon whose shoulders the responsibility for all these alleged defects should rest, and Mr. Muir Mackenzie decides that, so far as the clerk of works is concerned, he (the clerk of works) had no power or authority, of himself, to authorise or permit the contractor to disregard Clause 7 of the conditions of contract. Mr. Muir Mackenzie quotes the case of *The London School Board* v. *Wall*, in which the builder sought to excuse deviations from the contract, in the matter of materials and workmanship, on the ground that they had the approval of the clerk of works, and another officer appointed on behalf of the building owner to look after the work. The Judge, in this case, directed the jury that the clerk of works, and officer, had no power to sanction such deviations, and that their sanction did not protect the builders.

Then as to the responsibility of the architect for the quality of the timber and general construction of the roofs and floors: did he by way of authorising or allowing the deviations excuse the plaintiff wholly or partly? In Mr. Muir Mackenzie's opinion the authorities show that, in a contract like this, the power of the architect to order or sanction variations does not empower him to authorise departures from the terms of the contract which involved the substitution, in the whole or part of the work, of "inferior" materials and workmanship for those prescribed and charged for in the contract price, so as to prejudice the strength and stability of the building. Another case is quoted by Mr. Muir Mackenzie (*R.* v. *Peto*), in which the builder, by express direction of the surveyor, omitted from the foundations some piling which had been specified, and, in another part of the building, filled in some spaces with broken material instead of the solid material specified. It was held that the surveyor's directions were no excuse to the builder; that the surveyor's power to vary or omit was limited to extra work to be done or work to be omitted, and did not extend to authorising the

substitution in the building of one class or description of work for another, especially where the substitution would affect the strength of the building.

Mr. Muir Mackenzie has therefore arrived at the conclusion that in this case the acquiescence of the architect in the wider spacing of the joists in No. 6 room, and his permission to the builder to supply timber of a description and quality inferior to that which the plaintiff contracted to supply, did not absolve the plaintiff from his obligation to fulfil the contract and specification in regard to the timber, or prevent the disregard of the specification and other conditions of the contract from being a breach of the contract, and Mr. Muir Mackenzie decides that in regard to the two matters above mentioned the plaintiff committed breaches of the contract.

Then as to the *roofs*—dealing with the quality of the timber, the raising of portions of the roofs with the acquiescence of the architect, and the spacing out of the timbers, and other matters complained of—Mr. Muir Mackenzie remarks that on one side the work generally was described to him in terms of unqualified "eulogy," and on the other side in terms of unqualified "condemnation," and also in terms of "moderate eulogy and condemnation." He refers to two of the architects of large experience who gave evidence for the defendant, and who described the roofs as having been "thrown together without any regard to good workmanship, and as very poor specimens of carpenters' work, as botching work, and as of very defective construction," as "moderate witnesses."

Mr. Muir Mackenzie has evidently been at very great pains to arrive at a just decision as regards these roofs. He finds that there are defects in them, and that they are less sound and well constructed than the roofs to which the defendant had a right under his contract, but that the plaintiff is not wholly responsible for the inferior condition, "some of it being the inevitable result of the change of design by the architect and the direction to the plaintiff to use the trusses and materials obtained from the roofs originally designed, and carry out the change of design as best he could," and Mr. Muir Mackenzie has treated the alteration to the twin roof "as part of a duly authorised variation." As regards some of the other matters of complaint, Mr. Muir Mackenzie considers that they were mainly due to the variations introduced by the architect, and the manner in which he required them to be carried out. Other alleged defects, which Mr. Mackenzie specifies, have not, he says, been established to his satisfaction.

Mr. Muir Mackenzie next deals with the defendant's attacks on the joinery as being bad in material and workmanship. He quotes the effect of Mr. Murray's and Mr. Ball's evidence on this as, shortly, that "all over the house mitres and joints have given and opened, that panels have opened from stiles, and that all the numerous defects of the kind are due to the wood of which the joinery was made having been bad, unseasoned wood, and to inferior workmanship."

I, on the other side, stated in evidence as regards the joinery that it was perfectly good, and that the openings of mitres, &c., referred to were all to be expected, and were not by any means unusual in new buildings rushed as this one was; that the better the seasoning of the wood the more these openings would show themselves, by reason of the wet in the building—wet brought out more rapidly by the abnormal heat in the house from the radiators to which I have before referred.

Mr. Muir Mackenzie states his opinion that as regards the "quality" of the wood, the onus of proving that it was inferior and unseasoned was on the defendant, and that he has not discharged it. Mr. Muir Mackenzie states that much that is properly complained of is due to the sinking of the floors and other parts, but that the amount of joinery which was defective in construction, when supplied, is not large.

Drainage.—Mr. Muir Mackenzie, as regards the drainage, treats the fact that the defen-

dant himself employed Mr. Usill (Engineer to the Sanitary Protection Association) to design and superintend the carrying out by the plaintiff of the system of drainage and water supply designed by Mr. Usill, as justifying the payment by the defendant of the plaintiff's account, less a sum amounting to £7 4*s*. 3*d*. to make good some defects.

General Complaints.—Mr. Muir Mackenzie then, at great length, deals with the numerous items of separate complaint, not included in those I have referred to; but the length of my Paper would be too great if I even attempted to *epitomise* the careful criticism which Mr. Muir Mackenzie devotes to these matters. I think I may fairly state that, on the whole, the plaintiff succeeded in establishing his case as regards all these very numerous items—some of which were very trivial, one being allowed at the price of 2*s*.

Results of Defects.—Mr. Muir Mackenzie finds that the weakness of the floors has produced fissures, and cracks, and sinkings and partings of joinery, and that it is necessary for the stability of the interior of the house that remedies of the kind described by the defendant's witnesses should be undertaken.

Mr. Muir Mackenzie very carefully points out that he has to find "what is the compensation to which the defendant is entitled from the plaintiff's default alone, and to inquire whether the condition of things is wholly attributable to the plaintiff's default." Having arrived at certain conclusions on the evidence, Mr. Muir Mackenzie then has "to consider the measure of damages in a case in which a builder has, by supplying work and materials inferior to those contracted for, broken his contract."

Mr. Muir Mackenzie sums up the important question of what would really be necessary to put the interior of the house into a safe and proper condition in accordance with the contract, as follows: "The works of remedy or reconstruction suggested by Mr. Woodward and Mr. Chidgey, by Mr. Foster, and by Mr. Murray and Mr. Ball, are, I dare say, all practicable, but those of Mr. Woodward, Mr. Chidgey, and probably Mr. Foster, would be insufficient to remedy the defects for which the plaintiff is responsible; and those of Mr. Murray and Mr. Ball would remedy a great deal more than the plaintiff is responsible for."

A matter of some importance was that the defendant claimed, in his damages, the cost, or some of the cost, of removing, storing, and bringing back his furniture during the works of repair of defects; and further the cost of employing professional assistance in the work of reconstruction or repair; but, on the authority of *Green* v. *Eales*, Mr. Muir Mackenzie disallowed these claims.

Power to order Extras.—Another matter of some importance raised in this case was with reference to what were, and what were not, authorised *extras*. The defendant's contention was, in effect, that no extra works could be charged for unless authorised by writing or drawings signed by the architect, or by a written approval after having been done. The plaintiff contended, in opposition to this, that he (the plaintiff) was entitled to be paid for all additional or extra work or materials which had in fact been ordered or sanctioned by the architect, or by the clerk of works, or by the architect's deputy or assistant, or by the defendant or his wife, or had been rendered necessary in consequence of variations so ordered or sanctioned. Clauses 12 and 13 of the conditions of contract deal with this matter.

On the construction of these clauses Mr. Muir Mackenzie found in favour of the defendant. The summing up of Mr. Justice Day in *London School Board* v. *Wall* is cited, in addition to other cases, in support of this view. The question as to how far the defendant could be held liable for extras of which, perhaps, he had no cognisance is dealt with as follows by Mr. Muir Mackenzie. He says: On the one hand, where an employer has protected himself by a written contract for a lump sum, the mere fact that he sees, sanctions, or permits, or discusses variations in the carrying out of the contract, does not impose on him a liability to pay any extra cost, unless he is plainly told, or must know from the circumstances

that the variations will mean an extra charge to him. Being, of course, ignorant of the details of the contract work, he is entitled to the protection of his contract. The cases quoted in favour of this view are *Lovelock* v. *King* and *Thausis Company* v. *McElroy*. But, on the other hand, it is equally the law that if an employer desires the builder to make alterations, and additions, and omissions, and sees extra expenditure being incurred upon them, of which he takes the benefit, he cannot refuse to pay on the ground that the expenditure was incurred without proper orders given for the purpose. The case quoted in favour of this view is *Hill* v. *South Staffordshire Railway Company*.

Discounts.—The question of discount from payments to sub-contractors also arose in this case. It appears that the condition in the bill of quantities is quite clear on the subject of provisional items supplied by firms, viz. "That the contractors must pay the amounts in full, and produce the receipts, before the amounts can be included in the certificates on which the defendant is liable." The defendant claimed to have a deduction of 5 per cent. from the account of one of the sub-contractors on the ground that if it had been paid promptly there would have been a discount of five per cent. of which the defendant would have been entitled to the benefit. Mr. Muir Mackenzie disallowed this objection, and added that he thought Clause 28 of the conditions of contract equally clear, and that only amounts which had been paid to firms and tradesmen could be included in the certificates. This Clause 28 differs from the above quoted condition in the bill of quantities, which latter provides for the production of the receipts of the sub-contractor by the contractor before the amount is included in the certificate. Clause 28 does not require the production of such receipt before a certificate is granted in which the amount is to be included, and this fact has caused, in other cases, much discussion between architects and builders.

A Few General Observations on the Case.—Many thoughts have obtruded themselves in my mind during the writing of the above paper, and I hope that many thoughts will arise in the minds of my hearers, which will result in their giving us the benefit of their views generally on the points which have arisen in this case, and add to our knowledge an account of any similar troubles in which they may have been involved.

It is of no use to cry over spilt milk, but I cannot help expressing my regret that the plaintiff was not allowed to do what he was perfectly willing to do, and in fact was bound to do under Clause 17 of the contract, and that was to go down and make good all defects which had appeared in the house before Mr. Foster was superseded by another architect. Whether or not what he might have done in the way of making good defects would have satisfied Mr. Foster or the defendant is another matter, but at least the plaintiff should have been afforded the opportunity to try.

As regards the responsibility for making good defects arising from faulty construction—construction designed or acquiesced in by the architect—it does seem to me most unfair that the result of this should be placed upon the shoulders of a builder. Mr. Muir Mackenzie has not, I think, laid down any clear and decided opinion as to this, but he rather judges each item on its merits. I have hitherto thought that, as regards defective materials and workmanship, the builder is responsible, but that as regards the mere carrying out of the designs and directions of the architect, the architect or the client was responsible for bad results. H.M. Office of Works deals with this particular matter in a manner to my mind quite fair. There is a clause in their contract which runs as follows: "But if any failure shall have arisen in the work, or any part thereof, by reason of a defect in the design of the architect, then the builder shall not be responsible for such failure, and the same shall be made good as extra work under Article 7 of these conditions if so required by the Commissioners."

There can be little doubt that the many actions which have been fought during the last

few years have brought to the front responsibilities and troubles never before realised by architects and builders. Our present conditions of contract do not provide in any way clearly for the settlement of these troubles, and it becomes, day by day, more urgent that these conditions of contract shall be revised, for the protection alike of client, architect, and builder.

DISCUSSION ON MR. WOODWARD'S PAPER.

Mr. Leonard Stokes, *President*, in the Chair.

Mr. H. D. SEARLES-WOOD [*F.*], Chairman of the Practice Standing Committee, said he had great pleasure in proposing a vote of thanks to Mr. Woodward for his excellent and impartial analysis of the important case decided by Mr. Muir Mackenzie. With regard to the discussion of the other papers, it had been thought better to keep back publication until Mr. Woodward's Paper had been read, so as to include all in one issue of the Journal. This would form, he thought, a very useful *vade mecum* for architects. He should like to suggest that the Council refer this important discussion to the Practice Standing Committee with a view to their drawing up a short guide to modern practice. Such a work would prove of the greatest service to the profession.

Mr. HENRY T. HARE, *Hon. Secretary*, seconded the motion.

Mr. MAURICE B. ADAMS [*F.*] said they could not express their thanks too warmly to Mr. Woodward for the analysis which he had so carefully prepared for them of this important case. He did not know whether any remarks would be permissible which did not exactly apply to this particular case, but newer difficulties than those described were arising more and more in the practice of their profession, and some measures ought to be taken to deal with them. He referred more particularly to the system which prevailed among engineers and architects, for specialists to be called in to prepare schemes for the use of ferro-concrete, and then for the specialists to seek out contractors to carry out their work, they themselves undertaking to be responsible as designers for defects resulting from any fault in the matter of design or from the use of insufficient materials, and the contractors being liable for any deficiency in the materials they supplied and for the manner in which the work was carried out. With this divided responsibility it was extremely difficult to ascertain who was really responsible. He had in mind a case where a structure erected for a Corporation did not properly fulfil the objects for which it was built. The specialists said that if they were called upon to do the work again they would design it exactly as they had done. The contractors, men of high reputation in their line, said, "If you can show us where the work is wrong we will put it right." The discussion seemed likely to lead to a similar case to that which Mr. Woodward had described, and enormous expense would have been involved. But in the end the employers paid £100, the specialists paid £100, and their contractors paid £100, so the whole matter was put right for £300, and probably, in that way, an expense of from £1,500 to £2,000 was avoided. Could not something be done to fix the responsibility more closely? Imagine a young architect having to deal with an experienced contractor and a very capable specialist, each contesting liability. The architect has the interests of his client to consider, but very often he enters into such responsibilities as these which he ought never to have undertaken. The speaker thought it very desirable that some definite scheme should be decided upon so that this difficulty could be fairly and squarely met.

Mr. G. A. T. MIDDLETON [*A.*] drew attention to the mischief caused by the use of antiquated clauses in specifications—for instance, a certain timber would be specified which it was practically impossible to obtain. The use of these antiquated clauses seemed very common in the provinces; young men apparently simply copied them from the specifications of their principals, and so they were perpetuated from generation to generation. He thought it should be impressed upon architects all over the country to bring their specifications up to date, particularly in such materials as timber, steel, and cement.

Mr. W. HENRY WHITE [*F.*], in supporting the vote of thanks, said that Mr. Woodward's clear and lucid description of the case would be of the greatest value to architects. He hoped that the various Papers brought before the Institute through the instrumentality of the Practice Committee, together with the discussions thereon, would not be allowed to drop into obscurity, but that advantage would be taken of them for the benefit of the younger men, particularly with regard to specifications. He thought a Committee should be appointed by the Institute—either the Science Committee or the Practice Committee—to bring the obsolete clauses of specifications into line with modern practice. The text-books were still very deficient in the practical information required for everyday work. The Committee he was suggesting should thoroughly revise all clauses in the specifications so that they might have a reasonable standard to work to. He hoped Mr. Searles-Wood's suggestion as to the preparation of a guide to modern practice would be taken notice of and

adopted. With regard to arbitration clauses, it was rather a mystery why these should be so weakly worded as to enable litigation to crop up before the arbitrator had heard the case and given his award. If arbitration clauses were so worded as to make it a condition precedent to a law case that the matter should go to arbitration, much of this expensive litigation would be avoided.

THE PRESIDENT: I have heard it stated that it is cheaper to go to the Law Courts than to arbitration.

MR. WHITE: That is one of the points that requires attention in the wording of our contracts. Arbitration should be cheaper than the Law Court.

MR. HERBERT A. SATCHELL [*F.*] endorsed the remarks of previous speakers with regard to specifications, especially those dealing with timber. Specifications of timber, he said, were hopelessly out of date. Architects were generally blamed for that, unfairly he thought, because if there was one subject more difficult than another to find out about, it was about timber. Until recently he believed he was right in saying that there was not a single text-book on timber from the timber merchant's point of view. Architects' offices were inundated from year's end to year's end by thousands of pamphlets —which, of course, went into the waste-paper basket—but there was scarcely one which gave an architect, in a way which would appeal to him, an idea as to what timber was in the market and was obtainable. Therefore if an architect specified sizes which were no longer imported, brands which for one reason or another were not available, the architect could scarcely be blamed, for a busy man would have no time to keep on going to the docks and ascertain for himself what could be obtained. And the timber journals were not easy to understand; they were full of miscellaneous matter which the architect did not want. So if the Institute could convey to those concerned a statement suggesting the advisability of posting up architects as to the timber it was reasonable to specify, great assistance would be rendered to the profession, and there would be less excuse for the mistakes which were now made. Many specified that the very best timber only shall be used, and the same specification was made to apply to the cathedral and to the cottage. Obviously, when such a specification was in question in the Law Courts, the Judge did not feel any sympathy with the architect who expected in a close-cut competition job for small work the same class of material which would be called for in the case of a building of national importance.

THE PRESIDENT: Is it a fact, as Mr. Woodward states, that the better seasoned the wood is, the worse it behaves in a new building? I can understand that it may be inferior if it is dried out, but not if it is well seasoned.

MR. WOODWARD: I should like the opinion of the meeting on that point. What I meant was that where the timber is well seasoned it is more receptive of dampness than wet timber. I was referring not to artificially-dried timber, where the goodness is taken out, but to well-seasoned timber. The latter soaks up neighbouring moisture quicker than timber just fresh from the docks and full of moisture.

MR. WHITE: If the timber is well seasoned it is dry, and the drier it is, the more absorbent it is. I have had cases of old houses that have been painted probably thirty or forty times in the course of their existence, and when the windows have been taken out during the wet season and the moisture has got into the building, the panelling has first of all absorbed the moisture and swollen, and then when the room gets heated and dry the shrinkages have been greater than in a new building. Timber will absorb moisture from a wet surface, and the greater the dryness of the wood and the heat, the greater will be the rapidity and extent of the shrinkage.

MR. WOODWARD: Mr. White's remarks remind me of an incident in my practice which I should otherwise have forgotten to mention. I was doing some work in an old hall in the New Forest. The panelling was stated to be at least a hundred years old, and it had not been painted for many years. We decided to paint it cream colour. Prior to re-painting it was washed well with water, with the result that Mr. White mentioned; there was $\frac{1}{8}$ of an inch all round every panel as the result of shrinkage from the receptive nature of the old wood, and we had to make good the shrinkage.

THE PRESIDENT: But wet makes wood expand as a rule.

MR. SEARLES-WOOD: All wood is hygroscopic. It expands first; you put on the paint, and it shrinks afterwards.

MR. SAXON SNELL: When bad timber shrinks it also twists, whereas good timber only shrinks.

MR. WHITE: In addition to that, badly seasoned timber will rot, but well seasoned timber, although it may shrink, will not rot and cause other defects. If you paint over skirtings of badly seasoned timber, you will probably get dry rot.

MR. J. OSBORNE SMITH [*F.*]: I gather that much of the trouble in *Minter* v. *Waldstein* came about because the builder unwisely carried out the instructions of the clerk of works in regard to variations, instructions which he had, apparently, no authority to give. If the builder had not varied the work without getting orders from the architect in accordance with the contract, trouble would probably not have arisen.

MR. SNELL: It is the architect's duty to make proper specifications and to take time to see that the work is properly carried out. He should not leave the work so much in the hands of the clerk of works.

MR. H. HARDWICKE LANGSTON [*A.*] said that it seemed to him that it was not a question of

newer responsibilities for architects, but that architects were finding themselves in a new position. Such matters as those pointed out were not newer responsibilities. The public were beginning to understand what the architects' responsibilities were, and were going to make them suffer for their faults. It therefore behoved architects to pay more attention to their duties.

Mr. C. A. GEEN [*A.*] agreed with the last speaker that the responsibilities brought home to the architect in the case of *Minter* v. *Waldstein* were not new responsibilities at all; they were as old as the Roman law, and had always been the responsibilities of architects in this country. Such cases, however, frequently disclosed responsibilities which were not understood before. In this case Mr. Minter proved that he had extras to the extent of about £4,000 ordered by the architect or by the owner, and the architect gave his certificate for these extras. That, as he understood, was what the statement of claim disclosed. But the defendant said that the architect's certificates were given after the revocation of his power and authority; also that the work was to be first-class work, whereas the work was very poor work, as shown by cracked walls and such like defects. The question was whether those two answers disclosed a good defence to the claim. If so, Mr. Minter was entitled to judgment. Did the contract say that the certificates were to be given by the architect for the time being? Or that they were to be given by the architect named in the contract and no other architect? There was a difference between these two, and the point could only be decided by reference to the contract itself. With regard to the agency, did the architect have power and authority to order extras? It would be astonishing to some architects to learn that the architect had prima facie no authority to order extras; but the owner could give him such authority. The owner was under no liability for extras ordered by his architect just because he had employed the man as architect and as architect alone. If it were otherwise it was obvious that he would be giving the architect power, as had already been said, to ruin him by ordering expensive extras. Supposing an architect had the owner's authority to order extras; it might be a limited authority up to £50 or £500 or £5,000, or it might be unlimited. It depended upon what the authority given to the architect was. What was the builder to do if he did not know the extent of the architect's authority? The builder knew the architect was an agent and not the principal, and the law assumed that he knew it, and that therefore it was his duty to inquire as to the extent of the architect's agency. When dealing with an agent we must inquire as to his authority, and the onus is upon us to do so. If the architect truthfully informed the builder of the extent of his authority, the architect could not be liable for goods ordered by him as agent. If the architect professed to act as agent for the owner, and was not authorised by the owner to order extras, the architect was himself personally responsible. He was responsible for the goods on a warranty of authority; he had warranted that he was authorised to order these extras. On the question of revocation of authority, where the agent was employed to enter into a contract involving personal liability and was authorised to discharge such liability on behalf of the principal, the authority was irrevocable as soon as the liability was incurred by the agent, that is to say, the consent of the owner and the agent was then necessary to revoke it. Since 1882 a deed could be executed by the owner giving a power of attorney for one year to the architect, and expressing in the deed that it was to be irrevocable during that time. Even then the power was only irrevocable in favour of a purchaser for valuable consideration, that is to say, a third party who had changed his position owing to his reliance upon the power of attorney. On the question of notice, the authority of an agent, whether conferred by deed or not, was determined by the principal giving to the agent notice of revocation at any time before the authority had been completely exercised. But where a principal represented that an agent was authorised, or that the architect was authorised, to act on his behalf, the principal was bound with respect to third persons dealing with the agent without notice of revocation or determination of authority. When an architect was discharged by the owner it was his duty immediately to inform his builder by giving him clear notice of such a fact, and if necessary naming the new architect. If the builder received no notice, he would be justified in believing the architect's employment to continue. This was called the doctrine of estoppel, which meant that the owner was stopped from denying that which he had held out to be the case. He had held out a person to be his architect, and therefore should give the builder notice of the architect's discharge. It followed that if the builder obtained the architect's certificate before he had notice of the architect's discharge, the certificate was good. But the architect would not do right in giving his certificate after his discharge, and would be personally liable to the owner if the owner were prejudiced by his giving it. On the question of discharge of the agent, one has to consider whether the owner himself could insist upon his architect continuing in his employment if the architect gave him notice that he would no longer continue as architect. And on this point no action at law was maintainable by the owner or his architect to compel specific performance of the contract of agency. The Court might, by injunction, restrain the negative breach of such a contract. If the architect agreed to be architect to the owner for a certain period, and also

said he would not be architect for any other owner during that period, the Court could say, "We cannot compel you to continue being architect during that period, because you might do your work so badly that it would be worse than your discharge. But we can say that you shall not be architect for any other owner's building during that period." This was decided on the famous case of *Lumley* v. *Wagner*. Lumley was a theatre proprietor, and Wagner was a singer, and the singer agreed to sing at Lumley's theatre and no other. The Judges said: "We cannot compel you to sing at Lumley's theatre, because you may sing so badly that you will drive all the people away; but we can say that you shall sing at no other theatre." The builder's position had to be considered. If the architect was discharged, the question would arise between the owner and builder as to whether the latter entered into a contract upon or in consequence of his faith in the integrity and fairness of the architect. The builder might thoroughly distrust the first architect's successor. It was therefore important to know what the builder did when he heard of the change of architect. If he did nothing he would be held to acquiesce in the change. Whatever his opinion might be of the new architect, his safer legal course would be to send a letter of protest to the owner. On the question of negligence, if the builder said, "I built, as an extra, a wall where you told me to build a wall, and the exact kind of wall which you ordered to be built. If that wall cracks it is your fault; it is your sort of wall, not mine." If all these things were found to be true, it would seem to be a question to be fought out between the owner and the architect whether the latter was negligent, and who was responsible for it? The architect might clear himself by saying that he pointed out to the building owner the possible defects which might occur in the wall if built as the owner directed, but that the owner insisted on having the wall built as he wished.

The PRESIDENT, in putting the vote of thanks, said that Mr. Woodward's Paper was a most admirable one, and the case he had dealt with was full of puzzling points. He wished that it had never arisen. Such cases were very unfortunate, and it was to the interest of everyone to try and avoid them, because when once they got into the clutches of the law, or even of arbitrators, it was very hard to make them understand exactly how the matter stood, and the judge or arbitrator would perhaps fly off at a tangent and fix on the wrong point, the award would be issued, and a decision be obtained which would be looked upon as final and binding and likely to help them in a future case. But it would be found that the case did not help them at all, because it could not be made to fit into circumstances which were even slightly different. Hence, architects were apt to go wrong if they were too obstinate about their exact rights, and as to what could and what could not be done under the law. If the client would agree, and the builder would agree, it was advisable for the architect to meet the case in a good give-and-take sort of fashion, and to come to some sort of agreement instead of fighting. It was unfortunate when a builder made a bad job, but the law did not make it better as a rule; the bad job still existed and would have to be put right, and it cost more for the lawyers to put it right than to get it rectified in the ordinary way. He had noted Mr. Searles-Wood's suggestion, that the Council should ask the Practice Committee to put their heads together and see if some sort of guide could not be compiled from recent cases to help young architects in their practice. The idea seemed a good one, but they must be careful how they laid down hard-and-fast rules to guide young men, because cases varied so much with different conditions. Young men posted up in these rules might try to force matters, and then, if other points arose which were not provided for, litigation would ensue, and everyone would be worse off than if he had not known quite so much; it would be a case of the old saying, "A little knowledge is a dangerous thing."

Mr. WOODWARD, in reply, said that with regard to the spacing of the timber it would seem that the clerk of works had exceeded his authority. But it was urged on behalf of the builder that although the spacing was different from that specified, still the actual quantity of timber used was practically equal to the amount specified. It was not a question of using less material than was specified, but whether the method of spacing out did not tend to make the floors dangerous, or at all events liable to sag. A very important point had been raised by Mr. Geen with regard to agency. He (Mr. Woodward) had always understood that the architect, as the agent of the employer, had the power to pledge his client's credit practically to any amount. In *Minter* v. *Waldstein*, the Official Referee, Mr. Muir Mackenzie, said that if the extras ordered were for the benefit of the structure, then the architect was justified in ordering those extras. But whatever the order was, if it was injurious to the structure, as in the case mentioned—where, for example, if the specification was for a wall to be built in Portland cement and the architect ordered it to be built in mortar—that would be an unjustifiable order, and the contractor would probably have to pay for it, although it was ordered by the architect. But if, on the other hand, the specification was for mortar, and the architect ordered it to be of cement, that was a justifiable extra, and the client must pay. He had asked time after time in these discussions as to a definition of agency, but had never yet got a satisfactory reply as to the general power of the architect to order extras without the cognisance of the employer. And in this very case Mr. Muir

Mackenzie had left the point ambiguous. This was one of the things he should like cleared up—namely, as to the extent to which the architect was empowered to order extras for the benefit of the building. He was not sure, even after these cases, whether an architect was empowered to order extras outside the contract without the specific authority of his client.

A MEMBER: Do you know the Conditions of Contract?

MR. WOODWARD said he was well aware of the Conditions of Contract,* but it was the variation from the Institute Conditions that caused the trouble. He agreed with Mr. Langston and Mr. Osborne Smith that if architects did their strict duty these difficulties would not arise, and they would not get themselves into trouble. They knew now—and he thought they knew before—that the clerk of works had no power to order extras without the sanction of the architect, and that the builder ought not to carry out the instructions of the clerk of works. But it was done every day, and the value of such Papers as those read by the Practice Committee was to warn architects that they were too free-and-easy with regard to the carrying on of their works; it should also make them very careful not to order this and that without the client's knowledge. With regard to Mr. Searles-Wood's suggestion, he thought it a very good one, and he hoped it would be carried out. He also thoroughly agreed with the observations that had been made with regard to the mediæval character of the specification for timber. For himself he did not care at all where the timber came from, so long as it was good, sound, healthy material. It often happened that the timber specified had run out, and it was impossible to get it for love or money. Therefore it was ridiculous to put in these clauses, and he trusted that in that direction the specification would be altered. Cases such as that mentioned by Mr. Maurice B. Adams were certainly growing, and it was a subject which deserved the serious attention of architects; this throwing of responsibility from one to the other, from the ferro-concrete man to the contractor, might lead to considerable trouble, and the question would arise in what respect the architect himself might not be held liable for serious defects from such shifting about of contractorial relations. With regard to Portland cement, so called, that was a matter which should receive more care than it did on the part of architects. There was an enormous amount of so-called Portland cement from Belgium and Germany, and it was very inferior in quality. But it was used very largely in building works, and he trusted that now the eyes of architects were open to that fact they would see to it that every cask of cement had the name fairly stated on it. With regard to arbitrations, he had been in arbitrations conducted by lawyers, and in arbitrations conducted by architects, and his experience was that arbitrations conducted by architects cost very much less and were far better understood than those conducted by lawyers. The legal arbitrator could correctly define the various clauses in the specification, but he did not know, and was not perhaps expected to know, the difference between good and bad materials. All he said was, "You have specified that the timber is to come from Riga, and it must come from Riga. I do not care whether there is any to be got from Riga or not; but if you do not bring it from Riga you will have to pay for omitting it!" Whereas the architect, knowing that it could not be got, took it into serious account when making his award. He agreed with Mr. Langston as to the need for architects to pay more attention than they do sometimes to their specifications. In his own young days he always wrote his specifications himself, and his feeling now was that if the architect did not write his own specifications he was not so well up to his work on the building as he would be if he did. Therefore he would earnestly commend to the young men the necessity of writing their own specifications.

* Clause 12 of the Institute Form of Contract reads:—"The Contractor shall, when authorised by the Architect, or as provided by Clause 5, vary by way of extra or omission from the Drawings or Specification; such authorisation is to be sufficiently proved by any writing or drawing signed by the Architect or by any subsequent written approval by him, but the Contractor shall make no variation without such authorisation. No claim for an extra shall be allowed unless it shall have been executed under the provisions of Clause 5, or by the authority of the Architect as herein mentioned. Any such extra is hereinafter referred to as an authorised extra."

Antiquated Specification Clauses.

Mr. G. A. T. MIDDLETON [*A.*] writes:—

Following my few words at the Meeting on 3rd June, I should like to suggest the general adoption of the following specification for cement in modern work, viz.: "The cement shall be from an approved manufacturer, and every batch delivered upon the works shall bear his written guarantee that it complies in every respect with the specification of the Engineering Standards Committee for the time being in force." A similarly worded clause should suffice, in the majority of cases, for steel. Timber is more difficult to deal with, there being no definitely recognised standard, and different qualities being admissible in different classes of work. Would someone who is specially conversant with the subject come forward and suggest good clauses—not forgetting that American white-wood, and maple also, are often preferable to pine timbers for purposes for which the latter are now almost exclusively specified, often with the stipulation that they come from ports long closed to the timber trade?

9 Conduit Street, London, W., 15*th June* 1912.

CHRONICLE.

THE ELECTIONS TO COUNCIL AND STANDING COMMITTEES, 1912–13.

Scrutineers' Report.

To the Chairman of the Business General Meeting, Monday, 10th June 1912.

The Scrutineers appointed to count the votes for the election of the Council and Standing Committees for the Session 1912–13 beg leave to report as follows :—

1030 envelopes were received—389 from Fellows, 635 from Associates, and 6 from Honorary Associates.

The result of the elections is as follows :—

THE COUNCIL.

President.—Reginald Blomfield, A.R.A. (unopposed).

Past Presidents.—Sir Ernest George, A.R.A.; Leonard Stokes (unopposed).

Vice-Presidents.—*Elected* : Ernest Newton, A.R.A., 635 votes; A. W. S. Cross, 586; E. Guy Dawber, 576; George Hubbard, 558.

Not Elected : John W. Simpson, 526 votes; Walter Cave, 401.

Honorary Secretary.—Henry T. Hare (unopposed).

We received 1001 papers, of which 20 were spoilt and invalid.

(*Signed*) C. H. Brodie, *Chairman.* H. O. Cresswell.

Members of Council.—*Elected* : H. V. Lanchester, 780 votes; J. S. Gibson, 755; W. Flockhart, 719; E. A. Rickards, 698; Max Clarke, 694; W. A. Forsyth, 668; T. E. Cooper, 651; W. J. Tapper, 644; Wm. Woodward, 644; Wm. Dunn, 634; C. Stanley Peach, 629; Edmund Wimperis, 604; C. H. B. Quennell, 602; Sydney Perks, 578; W. Henry White, 558; F. R. Farrow, 546; A. W. Brewill, 520; S. Perkins Pick, 509.

Not Elected : W. R. Lethaby, 407 votes; Edwin T. Hall, 394; W. Curtis Green, 352; Maurice B. Adams, 328; Arthur Keen, 320; Edward Warren, 316; Sir A. Brumwell Thomas, 310; C. C. Brewer, 291; G. H. Fellowes Prynne, 280; P. S. Worthington, 279; H. P. Burke Downing, 277; Edgar Wood, 252; H. Wigglesworth, 221; Banister F. Fletcher, 184; W. H. Atkin-Berry, 183; J. B. Mitchell-Withers, 101; Robert Evans, 81.

We have received 1004 papers, of which 21 were spoilt.

(*Signed*) Wykeham Chancellor, George L. Crickmay, E. H. Bourchier, Horace J. Helsdon, John Borrowman, C. H. B.

Associate-Members of Council.—*Elected* : A. Needham Wilson, 673 votes; S. Warwick, 642; Alan E. Munby, 549; Edwin Gunn, 536; K. Gammell, 499; S. K. Greenslade, 411.

Not Elected : R. Atkinson, 386 votes; Digby L. Solomon, 354; H. Inigo Triggs, 262; W. H. Ward, 234; Stanley Hamp, 258; C. Wontner Smith, 214; G. L. Elkington, 156; F. R. Hiorns, 106.

We received 1001 papers, of which 35 were spoilt and invalid.

(*Signed*) J. Gordon Allen, Chas. Cyril Absolom, W. L. Trant Brown, George F. Collinson, C. H. B.

Representatives of Allied Societies :—C. E. Bateman (Birmingham); John Brooke (Manchester); Arthur Clyne (Aberdeen); John Alfred Gotch (Northamptonshire); George Hastwell Grayson (Liverpool); William Milburn (Newcastle); Alexander N. Paterson (Glasgow); Ernest R. E. Sutton (Nottingham); Alexander L. Campbell (Edinburgh) (unopposed).

Representative of Architectural Association.—Gerald Horsley (unopposed).

[*The above form the Council.*]

Honorary Auditors.—John Hudson [*F.*]; W. H. Burt [*A.*] (unopposed).

ART STANDING COMMITTEE.

Fellows.—*Elected* : Ernest Newton, 757 votes; E. Guy Dawber, 691; Henry T. Hare, 676; Gerald C. Horsley, 660; E. A. Rickards, 653; William Flockhart, 616; John W. Simpson, 602; Thomas G. Lucas, 568; Walter J. Tapper, 527; H. H. Statham, 475.

Not Elected : Cecil C. Brewer, 474 votes; H. P. Burke Downing, 442; Edgar Wood, 399; Arthur T. Bolton, 362; Francis W. Troup, 339.

(*Signed*) Bruce Dawson, Henry W. Finch, Fredk. Osborne Smith, A. G. Gover, W. H. Ansell, Douglas Anderson C. H. B.

Associates.—*Elected* : Arthur Needham Wilson, 742 votes; Sidney K. Greenslade, 726; Septimus Warwick, 697; John James Joass, 673; Matthew J. Dawson, 601 Maxwell Ayrton, 597.

Not Elected : Charles L. Gill, 531.

We received 911 papers, of which 11 were spoilt and invalid.

(*Signed*) Bruce Dawson, Henry W. Finch, W. H. Ansell, A. G. Gover, Douglas Anderson, Fredk. Osborne Smith, C. H. B.

LITERATURE STANDING COMMITTEE.

Fellows.—*Elected* : Paul Waterhouse, 738 votes; R. Phené Spiers, 723; J. A. Gotch, 696; W. Harrison Townsend, 653; F. M. Simpson, 643; W. Curtis Green, 625; Edward Warren, 602; D. B. Niven, 515; G. H. Fellowes Prynne, 481; C. S. Spooner, 469.

Not Elected : P. L. Waterhouse, 451 votes; Sir A. Brumwell Thomas, 431; Theodore Fyfe, 388; A. R. Jemmett, 337; A. T. Taylor, 245.

We received 886 papers, of which 7 were spoilt and invalid.

(*Signed*) W. H. Harrison, Ernest W Banfield, E. Percy Archer. F. Banister, T. P. Figgis C. H. B.

Associates.—*Elected* : Walter Millard, 653 votes; A. J. Stratton, 610; W. H. Ward, 609; C. Wontner Smith, 559; Herbert Passmore, 496; H. W. Wills, 440.

Not Elected : C. E. Sayer, 385 votes; F. R. Hiorns, 325; W. B. Hopkins, 308.

(*Signed*) W. H. Harrison, Ernest W. Banfield, E. Percy Archer. F. Banister T. P. Figgis, C. H. B.

PRACTICE STANDING COMMITTEE.

Fellows.—*Elected* : Wm. Woodward, 631 votes; Max Clarke, 589; H. D. Searles-Wood, 534; C. Stanley Peach, 511; Sydney Perks, 509; A. Saxon Snell, 471; A. W. S. Cross, 469; George Hubbard, 465; W. Henry White, 426; Walter Cave, 411.

Not Elected: Matt. Garbutt, 372 votes; Henry Tanner, Junr., 361; H. Chatfeild Clarke, 332; John Hudson, 258; H. A. Satchell, 248; R. S. Ayling, 234; A. W. Moore, 232; F. W. Marks, 162; G. E. Nield, 149; H. P. Monckton, 106; J. M. Mitchell-Withers, 94.

(*Signed*) R. H. Mew, Ernest Bates, Alfred E. Biggs, W. Ernest Hazell, Lionel Barrett, C. H. B. J. Sydney Brocklesby,

Associates.—*Elected*: J. Nixon Horsfield, 580 votes; C. E. Hutchinson, 527; K. Gammell, 506; E. Greenop, 504; H. W. Cubitt, 490; H. Shepherd, 474.

Not Elected: H. Hardwicke Langston, 469 votes; H. A. Woodington, 399; P. W. Hawkins, 384.

We received 901 papers, of which 16 were spoilt.

(*Signed*) Ernest Bates, J. Sydney Brocklesby, W. Ernest Hazell, R. H. Mew, Lionel Barrett, C. H. B. Alfred E. Biggs,

SCIENCE STANDING COMMITTEE.

Fellows.—*Elected*: H. Percy Adams, Ernest R. Barrow, W. E. Vernon Crompton, Bernard Dicksee, William Dunn, F. R. Farrow, Ernest Flint, Horace Gilbert, George Hornblower, Professor R. Elsey Smith (unopposed).

Associates.—*Elected*: Alan E. Munby, 621 votes; Digby L. Solomon, 514; E. W. M. Wonnacott, 508; Charles J. Marshall, 484; Robert J. Angel, 473; G. L. Elkington, 464.

Not Elected: Ernest A. Young, 441 votes; Henry A. Saul, 371; W. R. Davidge, 346; James E. Franck, 251.

We received 884 papers, of which 30 were spoilt and invalid.

(*Signed*) Edward T. Powell, Fredk. Osborne Smith. W. E. Brooks, C. H. B. Joseph Seddon,

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Business Meeting, 10th June: Notices of Motion.

On the agenda of the General Meeting last Monday was a motion standing in the name of Mr. Sydney Perks, F.S.A. [*F.*], "That a full and proper report of the debate at the Annual General Meeting on the 6th May with reference to St. Paul's Bridge be printed in the Journal." On reaching this part of the agenda the Chairman (Mr. Leonard Stokes, *President*) announced that the Council had carefully considered the matter that afternoon and had come to the conclusion that it would be out of order for Mr. Perks to proceed with his motion. By-law 61 stated distinctly that proceedings at Business Meetings "shall be private and shall not be communicated to the public press without the written consent of the Chairman of the Meeting." It was therefore for the Chairman to decide as to the nature of the report to be published, or whether any report should appear at all. The report prepared for the Journal had been submitted to him (the President). He found that it had been very carefully done, that it was an admirable and quite sufficient record of what had transpired, and he therefore authorised its publication. Having exercised his discretion as Chairman the Council considered that the matter could not be reopened.

The Secretary, at the Chairman's request, read the material parts of By-law 61, and also the resolution bearing on the subject which was passed at the General Meeting of the 4th March last, viz.: "That every speech delivered at any Business Meeting shall be published in the Journal at the earliest date after the Meeting, subject only to revision by the author and to such editing as the Chairman of the Meeting shall think desirable, and that the Council be requested to take the necessary steps to carry out this Resolution."

Mr. Sydney Perks pointed out that the resolution was very definite. It stated that every speech should be subject to revision by the author. But he had been given no opportunity of revising his remarks, for he had never received a proof. The idea of the resolution was that a proof should be sent to the author to correct, and then, if there was any libellous matter, or any matter which ought not to be printed in the Journal, the Chairman should have the right to cut it out. There had been nothing libellous in his remarks, for he had merely quoted a letter of the President's in *The Times*, and the Institute's petition to Parliament. Why should these matters have been omitted from the report? He was raising this matter on a point of order, for the resolution of the 4th March had never been carried out.

The President: A resolution cannot override the By-law. I exercised the discretion allowed the Chairman under the By-law.

Mr. Perks: This resolution, then, is not binding?

The Secretary: The report is "subject to such editing as the Chairman of the meeting shall think desirable."

Mr. Perks: After the proofs have been submitted to the speaker.

The President: I understand that a proof of what was published was sent to you. Did you protest at the time?

Mr. Perks: I protested by saying that the only place for the so-called "proof" which I had received was the wastepaper basket. I give notice that I shall not let this matter stop here.

The President: The question is closed now, as far as I am concerned.

A second motion on the agenda was in the name of Mr. W. R. Davidge [*A.*] as follows:—

"That, having regard to the report of the Honorary Auditors for 1911 and to the state of the Institute finances, it is desirable, in the opinion of this Meeting, that a Committee should forthwith be appointed with power to inquire generally into the finances of the Institute and all matters relating thereto.

"The Committee to consist of three members of the Council and three members of the general body, with power to add to their number; the Committee to have access to all documents and the services of all officers and advisers of the R.I.B.A.; to make any inquiries they may deem advisable,

and to report in writing, with any recommendations, to the Council of the Royal Institute; the report to be issued with or printed in the JOURNAL and submitted for discussion at a Business or General Meeting of the Institute."

The PRESIDENT said that he had a similar announcement to make with regard to this motion as he had already made respecting the first. The Council considered the motion out of order. He would ask the Secretary to read the clause of the Charter empowering the Council to deal with the Institute Funds.

The SECRETARY read the first part of Clause 16 as follows:—

"The Council shall subject to such limitations or restrictions as By-laws may from time to time prescribe have the sole management of the income of the Royal Institute and also the entire management and superintendence of all the other affairs and concerns thereof . . . ."

The PRESIDENT: You have elected a new Council to-night, which will have the disposal of the Institute funds in your interest. Are you going to say, as this motion implies, that you distrust the Council?

Mr. DAVIDGE: If you take the first part of the resolution and omit the second it would be in order. I am not suggesting that the Council should not appoint a Committee.

The PRESIDENT: There is already a Committee in existence called the Finance Committee. It is one of the hardest-worked Committees of the Institute; every item of expenditure is carefully considered by them.

Mr. DAVIDGE: I do not wish in the least to cast a slur on the Committee.

The PRESIDENT: The Charter says the Council shall have control of the funds. Yet you want to appoint another Committee to control the Council or to inquire into or criticise its actions.

Mr. DAVIDGE: My motion has nothing to do with the control of finances. I bow to your decision on the control of the finances. My view is to leave the appointment of the Committee in the hands of the Council. But as the Council decline the compliment, I am prepared to submit to your ruling. The first part of my resolution does not contravene the clause of the Charter which has been read.

The PRESIDENT: The Council, I may mention, was quite sympathetic in this matter. It took us some time to make up our minds as to the right line to take, but in the face of the Charter we could come to no other conclusion. When your new Council comes into office its first duty will be to appoint sundry Committees from amongst its members, and one of the most important is the Finance Committee. Surely you ought to trust them to do what is best for the General Body.

Mr. DAVIDGE: I am content to leave it there, Sir. But I should like an assurance that this matter will be brought before an early meeting of the new Council.

The PRESIDENT: As to past expenditure?

Mr. DAVIDGE: No, as to the present state of the finances generally.

The PRESIDENT: The present Finance Committee is already seriously considering this question. Mr. Max Clarke, who is the Chairman of the Committee, will perhaps bear me out in that.

Mr. MAX CLARKE: Yes, the matter is receiving our most serious consideration.

The PRESIDENT: And the new Council, I am sure, will give it equally serious consideration.

Mr. DAVIDGE: I was not contemplating the new Council. What I had in mind was to strengthen the hands of the Council. Personally, I have every confidence in them, but I feel that they ought to co-operate with the General Body more than they do. I have put down the motion in its present form not with the intention of finding fault with anything they have done, or of picking holes in regard to the past, but with the idea of finding out what the weak spots are, and of strengthening the hands of the Institute so that this big deficit may be wiped out. And I suggest that a business-like Committee should be appointed to weigh up the *pros* and *cons*.

The PRESIDENT: Will it help you at all if I say publicly from this Chair that any member of the Institute can have full access to any document in our possession; or, if he does not care to come and rummage amongst the archives, if he likes to ask questions that they shall be answered, and that any suggestion members may see fit to make shall be referred to the Finance Committee for consideration?

Mr. DAVIDGE: Yes, that is satisfactory; but we do not want the Committee to be hampered with the questions of individual members. And that is why I framed my motion in such a way as to satisfy everyone. It would be well to have outside opinions sometimes. I have heard from all quarters of this discontent, and it is not a healthy discontent. Much of it is unnecessary, and I suggest that the Finance Committee should make some sort of report which can be communicated to the General Body.

The PRESIDENT: I think I can pledge the new Council so far as to say that they will, as soon as possible, issue a report upon the matter.

Mr. DAVIDGE: Thank you very much; I accept that. (Applause.)

Mr. NEEDHAM WILSON, member of the Finance Committee: For the further information of Mr. Davidge I may say that the finances have been receiving, by direction of the Council, the most careful and thorough consideration of the Finance Committee for some considerable time. A report will be made to the Council in due course, and they will deal with it in any way they think fit.

The PRESIDENT: And that will be to make it public to the General Body.

Mr. DAVIDGE: I am sure if the Council do that, it will be most satisfactory to the General Body.

The PRESIDENT: I should like the meeting to understand that we do not want to shirk our responsibilities. But we have to be careful not to create a precedent which might on some future occasion be very embarrassing to the Council. If the General Body were in a position to say "The last time we made a fuss the Council appointed a Committee. Let us make another fuss and get another Committee appointed to supervise the Council," the Council could never go on. You would never get self-respecting men to sit on the Council if their work was liable to be overhauled by a Committee in this way. Though I personally shall not have much to do with the question in the future, I think the new Council will carry out the promise I have made on their behalf.

The meeting then terminated.

A New Allied Society.

The Council, in the exercise of its discretion under By-law 78, have admitted the New Zealand Institute of Architects to alliance with the Royal Institute.

A Piccadilly Façade.

In a letter to *The Times* of the 1st June, Mr. John Belcher, R.A. [*F.*], writes:

SIR,—To those who take a keen interest in the development and improvement of our street architecture the condition of the Piccadilly façade of the Piccadilly Hotel is a cause of astonishment and anxiety.

For nearly twelve months the building at the east corner has been partially demolished and the work left at a standstill. In a letter to the Press the architect states that this delay has been caused by an effort to come to some arrangement between the hotel company and his client to rebuild this eastern corner in such a way as to correspond or balance with the western corner, but these negotiations have fallen through. It is obvious that if the building is to be erected without any consideration of the portion already completed the result will be disastrous and this important locality will present a discreditable appearance.

At the inaugural meeting of the London Society the Earl of Plymouth reminded his hearers how the good citizens of Florence assembled together in their chief square to signify their approval or otherwise of the design for any proposed new building. A meeting in Trafalgar Square may not be necessary in the present case, but the Society might do well to express its views on the importance of adding this essential feature for the completion of the hotel façade so as to provide the necessary abutment to the existing open colonnade.

There can be little doubt that the Crown authorities have done their best to bring about this object, but they have been so far unable to obtain the consent of the hotel company to carry out the building on these lines, though it is difficult to understand the point of view of the objectors to such an obvious advantage to the building as a whole and to the amenity of the neighbourhood generally.

May I be permitted to suggest that the parties agree to appoint an arbitrator who should decide upon the manner in which the desired object can be secured while preserving the respective rights and requirements —and, if necessary, to adjust the value of any material loss incurred by either side?—Yours faithfully,

JOHN BELCHER.

The possibility of the disfigurement of an important thoroughfare by the perpetration of such a blunder as that contemplated in Piccadilly was one of the anomalies referred to in Mr. Raffles Davison's Paper read at the inaugural meeting of the London Society last month. The Society is justifying its existence by taking up the question, and the following letter in support of Mr. Belcher's views appeared in *The Times* on Wednesday, signed by the Earl of Plymouth [*H.A.*], Vice-President of the Society, Sir Aston Webb, R.A. [*F.*], member of the Council, and Mr. David Barclay Niven [*F.*], Chairman of the Executive Committee:

SIR,—The Committee of the London Society has seen with much interest Mr. Belcher's letter in your issue of the 1st inst. relating to the Piccadilly façade, and desires to express its entire agreement with the views therein put forward.

As your readers know, a great rebuilding scheme is in progress on Crown property in Regent Street and at the east end of Piccadilly, covering the whole of the ground between the Piccadilly Hotel and Piccadilly Circus.

The new frontage to Piccadilly under this scheme will extend for about 500 feet, and if the Piccadilly Hotel façade, at present unfinished, be completed as designed, it and the new block will make a noble addition to London's architecture.

The situation is in the heart of the Metropolis, and the hotel has been built with a fine elevation to Piccadilly designed by one of our leading architects, consisting of a centre and two wings, of which the centre and one wing have been built. Now, though it seems difficult to credit it, the other wing is being erected of a totally different design, height, and proportion, an outstanding instance of our want of sense of architectural fitness and effect.

If this course is persisted in a serious blunder will be committed; how serious will not be realised by the public until the scaffolding comes down, and then, as is usual in these cases, it will be too late to do anything, during the lifetime of the present generation at any rate.

It is with the object of calling attention to Mr. Belcher's letter and to the need of rousing public opinion on the necessity for some general control over the architecture of our streets that we are asking you to insert this letter.—Yours faithfully,

PLYMOUTH.
ASTON WEBB.
DAVID BARCLAY NIVEN,
Chairman of Executive

The London Society.

The Executive Committee of the London Society has been appointed as follows:—Mr. David Barclay Niven [*F.*], *Chairman*; Messrs. S. D. Adshead [*F.*], Herbert Batsford, J. W. Bradley, Arthur Crow [*F.*], T. Raffles Davison [*H.A.*], F. Douglas Fox, J. Hutton Freeman, Vincent Harris, Albert H. Hodge, Brook Kitchin [*F.*], W. L. Lucas, Beresford Pite [*F.*], G. Stevenson [*A.*], Carmichael Thomas, R. G.

Todd, Raymond Unwin [*F.*], Paul Waterhouse [*F.*], Maurice Webb, W. Willett, B. W. Young, and T. H. Mawson [*H.A.*]. The names of members of the Council were given in the last issue [p. 528].

National Art-Collections Fund: Some Recent Additions.

The National Art-Collections Fund has recently been instrumental in securing for the National Collections an early Georgian panelled room, removed from an old house, No. 27 Hatton Garden, which stood on the site of the garden of Hatton House, Holborn, built by Sir Christopher Hatton, Lord Chancellor in the reign of Queen Elizabeth. The house itself was erected in 1729–30 by one Thomas Milner on land leased from Viscount Hatton, and it was pulled down in 1907. The panelled room after its removal was exhibited in the Palace of Decorative Art at the Franco-British Exhibition, and in the spring of the present year it was purchased by the National Art-Collections Fund, with the aid of a body of subscribers, and presented to the Victoria and Albert Museum. The carved portions of the panelling, which is of dark pine, are of an elaborate nature, especially on the mantelpiece, wall cupboards, and doorways. The whole room, which is a fine and characteristic example of woodwork of about 1730, is attributed to the architect James Gibbs (1682–1754). It measures 23 feet by 22 feet, and will shortly be erected in Gallery No. 56 in the Victoria and Albert Museum.

Another gift through the same source is a Gothic livery cupboard of oak, formerly belonging to Arthur Prince of Wales, eldest son of Henry VII. The cupboard was discovered quite recently in a Shropshire farmhouse. The farm from which it came lies between Tickenhall (or Ticknell) Manor, Bewdley, built by Henry VII. as a residence for Prince Arthur, and Ludlow Castle, on the borders or Marches of Wales, where the Prince also held his Court, and in which in 1502, only five months after his marriage with the Spanish Princess Catherine of Aragon, he died, in the sixteenth year of his age. The front of the cupboard is carved with openwork panels of Perpendicular Gothic, with the letter A, and with two single ostrich feathers, as they appear on Prince Arthur's Chantry in Worcester Cathedral. In spite of its age and vicissitudes the piece is in remarkable condition and retains much of its original vermilion colouring. This interesting relic has been purchased by Mr. Robert Mond for the collection of English furniture in the Victoria and Albert Museum, to which he is offering it as a gift through the National Art-Collections Fund. Its height is 5 feet 4 inches; width, 4 feet 1 inch; depth, 2 feet.

The National Art-Collections Fund has purchased for presentation to the National Gallery of British Art, at Millbank, the original plaster model, by Alfred Stevens, for the semi-circular top of the mantelpiece in the saloon at Dorchester House. In the centre of the model is an empty circular space enclosed by a rich wreath of leaves tied with ribbons, the ends of which are shown, in the mantelpiece itself, against a background filling the circular space in the centre. The wreath is supported by two winged female figures with the legs and tails of beasts. This centre portion stands out in relief against a blue background, the whole being recessed under a broad, flat, semi-circular border. The saloon mantelpiece at Dorchester House is executed in Carrara marble and consists of an entablature shelf, supported by a pair of consoles on each side, with a large frame for a full-length picture (by Vandyck) above it. At the summit is the semi-circular panel for which Stevens made this model. The model measures 2 feet 6 inches (in centre) by 4 feet 6 inches.

Obituary.

Daniel Hudson Burnham, of Chicago [*Hon. Corr. M.*], who died at Heidelberg a few days ago, was a native of Henderson, New York, where he was born in 1846. In 1856 he removed to Chicago, where he received most of his education and undertook special studies in architecture. At the time of the great fire he was engaged as assistant with the firm of Messrs. Coster, Drake, & Wright, who had a large share of the rebuilding of the city. Mr. Burnham gained his reputation by his success in planning several of the leading business buildings in Chicago, where he established the firm of Burnham & Root in 1872. He and his partner contributed largely toward the adoption of the "skyscraper" as the normal type of office-building in the largest American cities. In Chicago itself they designed the Temple, the Masonic Temple, the Illinois Trust Bank, the First National Bank, the Railway Exchange, the Great Northern Hotel, Marshall Field's retail store, and the Ashland, Fisher, Reliance, Rookery, and Stewart buildings. He was an honorary graduate of Harvard and Yale Universities, and in 1894 was elected President of the American Institute of Architects. He first came prominently to the front as supervising architect of the Columbian Exhibition, better known as the "World's Fair," held at Chicago in 1893. In his capacity as Director of Works he arranged for the control of the scheme by a Board of Architects and for the assignment of the different buildings to different architects. His skill in dealing with architectural problems on a large scale led to his appointment as Chairman of the National Commission for Beautifying the Capital City of Washington. In conjunction with Messrs. F. L. Olmstead, jun., C. F. McKim, and Augustus St. Gaudens, he was responsible for the plans for the development and improvement of the entire park system of the District of Columbia. Assisted by Mr. H. Bennett, he designed the re-planning of San Francisco, and he was chiefly re-

sponsible for the great scheme for the future development of Chicago. He was employed by the American Government to prepare plans for the improvement of the city and harbour of Manila, and for the lay-out of the new city of Bagnio, the Summer Capital of the Philippine Islands. Mr. Burnham was present at the Town Planning Conference held at the Institute in October 1910, and contributed one of the most interesting Papers of the Conference under the title "A City of the Future under a Democratic Government." For the Exhibition held in connection with the Conference at the Royal Academy, he sent over a magnificent collection of drawings illustrating his ideas for the future development of Chicago. Mr. Burnham was elected Hon. Corresponding Member of the Institute in December 1910. At the General Meeting last Monday the Hon. Secretary briefly referred to the genius and remarkable achievements of the late architect, and the vote of regret and condolence recorded in the Minutes was passed in respectful silence, the whole assembly rising in token of assent.

Henry Shackleton [*Associate*, elected 1906], who died on the 15th April at the age of twenty-eight, served his articles with Messrs. W. H. & A. Sugden, architects, of Keighley, from 1900–1904. He was afterwards assistant successively to Messrs. Henry Wood & Co., Manchester, and Messrs. Bradshaw & Gass, Bolton. In 1909 he became assistant in H.M. Office of Works, Liverpool, being chiefly engaged upon the Labour Exchanges in Lancashire. He was architect of several small dwelling-houses in the neighbourhood of Keighley, and designed and supervised the erection of Alexandra Buildings, a fine block of shops at East Parade, Keighley. His last work was the supervision of the carrying out of his designs for a new Sunday School for the Baptist Church in Keighley. Mr. Shackleton had only been married six months.

COMPETITIONS.

King's Heath Baths Competition, Birmingham.

Reference was made in the last number of the Journal [p. 532] to the objectionable nature of clause 4 of the Conditions of this Competition with regard to the appointment of an Assessor, and stating that the Council of the Birmingham Architectural Association had requested their members to abstain from competing until the clause had been amended. Intimation has been received from the Hon. Secretary of the Association that the Council's objection to the competition is now removed, the promoters having revised the clause and decided to engage the services of a professional assessor.

CORRESPONDENCE.

Architectural Education and Cambridge University.

To the Editor, Journal R.I.B.A.,—

Sir,—My attention has been called to a letter in the Journal of 27th April, in which Cambridge University and its scheme of architectural education are mentioned. The writers have the goodness to suggest that our University representatives in Parliament would oppose the Registration Bill of the Institute, from pique at the exclusion of Cambridge from the benefits which the Institute is granting to other University Schools of Architecture. May I be allowed to point out that the University of Cambridge can have no such policy, and that there is not the least ground for such a conception of University methods?

There has been no exclusion of Cambridge such as the writers suppose. The first consultative Board of Education called together by the Institute included the Slade Professors of both Oxford and Cambridge, and they have now, when it has been constituted as a business board, been again nominated as consultative members on the same footing as other representatives of architectural education. Certain schools have obtained the privilege of exemption for their students under certain conditions from the Intermediate Examination of the Institute. We at Cambridge understand that the Council of the Institute will grant this privilege to any architectural school that satisfies its requirements. Our Board of Architectural Studies, which has just been constituted, has it in view to claim this exemption. But we shall do so on the grounds of the efficiency and thoroughness of the architectural education, which the Cambridge examination will test.—I am, Sir, yours truly,

Edward S. Prior [*F.*],
Slade Professor of Fine Art,
Cambridge University.

31*st May* 1912.

The A. A. Schools and the Architectural Museum.

Publication is requested of the following letter * from Mr. Maurice B. Adams which was the occasion for Mr. H. Austen Hall's letter printed in the last issue of the Journal:—

Sir,—There is, of course, much in the letter which appeared under the heading "The Decadence of English Architecture" [Journal, 11th May 1912] and written by Messrs. A. W. S. Cross and George Hubbard, with which most of those who have endeavoured to further the advancement of architectural education in this country will cordially agree; but whether this British Government is ever likely to adopt the proposals propounded as to an enforced standard of architectural examination is open to serious doubt.

Meanwhile, I venture to urge that much might be done on the lines thus put forward for the more intimate association of architectural students with the training of sculptors and painters, such as surely might be realised in the schools of the Royal Academy. No

* Originally published in the *Building News*.

other means at present available offer greater possibilities, and it is also certain that no Governmental scheme, limited as proposed to educational equipment for architects, would be more likely to advance the art of architecture, or would more surely accelerate efficient training in scholarly architectural design than could be accomplished by the all-round artistic environment to be insured by our Academy of Arts. No strictly statutory scheme under departmental direction is calculated to promote the Fine Art in the same degree.

The Royal College of Art has, we know, already given proof of a decided advance in the right direction; but it is little calculated to realise the description of what is needed as given in Messrs. Cross and Hubbard's letter. If the Architectural Association would be content to act, in its (strictly speaking) educational work, as a preparatory school working in concert with the Royal Academy, I feel sure that the results before long would more than justify the change. As a matter of fact, the classes at Tufton Street, admirable as they are, lack the breadth of outlook and scope of comprehensiveness in an artistic sense such as the Academy could afford when following upon a thorough technical grounding of the student in the more preparatory classes at Tufton Street—always, of course, provided that the necessary developments to enable this to be done would be made in the Architectural Schools at Burlington Gardens. At the present, if one may judge from the average degree of merit displayed by the annual exhibitions of students' designs at the Royal Academy, there is much room for improvement such as I contemplate would be undertaken.

The Royal Architectural Museum premises, as I am given to understand, are little adapted to allow of the needful extensions of the school accommodation to permit of the conduct and expansion of both the elementary and advanced classes now held in the building. Alterations are,therefore,contemplated which seem likely seriously to interfere with the carrying out of the undertaking under which the gift of the buildings and their contents was accepted ten years ago by the Architectural Association, when it was insured that the collection of the Royal Architectural Museum should be maintained and kept open to the public for ever.

I do not say that any intentional departure is proposed from the understanding entered into at the time of the transfer, and which, in fact, was made the subject of a binding agreement; but it seems not unlikely, if the schools outgrow the premises, that the existence of the Museum will be jeopardised, and it has never seemed to me to have been quite satisfactorily conducted since the rehousing took place, though, under the peculiar circumstances which followed the transfer, I was prevented from intervening or from helping in the rearrangement. Should more space still be allocated to the increase of the classrooms, the difficulty will be intensified, for the collection has to be maintained intact.

When I initiated the transfer, I always contemplated a free hand in the administration of the Museum by the Architectural Association—subject, however, to the governing proviso just alluded to; and this undertaking could better be carried out if the Tufton Street school could be treated as preparatory in unison with the Royal Academy of Arts; also I have reason to believe that the Council would rise to the opportunity by co-operating with the Council of the Architectural Association, with the object of perfecting a more complete scheme of architectural training, such as I think would be far better than any provided by Governmental enactment like that advocated by Messrs. Cross and Hubbard.

I am, etc.,

6th May 1912. MAURICE B. ADAMS.

The following is Mr. Adams' rejoinder to Mr. Hall's letter reprinted in the last issue of the JOURNAL:—

SIR,—When I wrote the letter which appeared in the *Building News* of 10th May [*see above*], I had no idea that what I was advocating had already been embodied "as a definite policy of the Architectural Association Schools in the future"; or that "the Council of the Royal Academy" had "extended practical encouragement to the Architectural Association students who are qualified to go to the Royal Academy."

I am extremely glad to have thus induced the Architectural Association officially to make public such good news, and also to tell us that the continuation classes will be curtailed at Tufton Street from four to three years. The pressure on the classroom accommodation will thus be modified and the standard of efficiency will be raised from the art side, seeing that before students can go forward to the Royal Academy School their qualifications will be tested. Those who fail must be relegated to avocations more congenial to their personal capacity and talents. That alone will be a great gain to all concerned. I can only express my gratification at this exceedingly satisfactory reply from the hon. secretary of the Architectural Association, Mr. H. Austen Hall.

On the other hand, I must venture to urge, as I have already suggested, that the Academy should see what developments can be made towards the more efficient equipment of their architectural school, and, speaking with all reservation, I can only form my idea of this necessity from the results, year by year, as shown by the Students' Exhibition of designs at Burlington House. However, I have no doubt, with this forthcoming augmentation of technically efficient students from Westminster, that suitable and corresponding improvements will be seen to. We can really entertain no doubt as to that, because of the personal association and intimate experience on all these matters of Sir Aston Webb and Professor Reginald Blomfield; while I am sure that the other architect "members"—Mr. T. G. Jackson (the treasurer), Mr. John Belcher, Sir Ernest George, and Mr. Ernest Newton—will aid to the full with their knowledge and influence, which will be also further encouraged on all occasions by many others in the Academy, like my friend Sir George Frampton, who knows so fully how sculpture concerns the advance of architecture, and who has studied in Paris and taught so well in London.

I am indebted to Mr. Hall for what he has said about the future of the Royal Architectural Museum, and I sincerely second the expressed intention of the Council to augment and complete the collection with Classic and Renaissance examples. In my time we tried to do that, but our efforts failed to obtain sufficient support. Now that the schools at Westminster and Piccadilly are to be practically affiliated, this may, I hope, be possible, and certainly the unique collection at Tufton Street ought to prove more useful than ever.

I am, etc.,

MAURICE B. ADAMS.

Books Received.

Stresses and Strains: their Calculation and that of their Resistances, by Formulæ and Graphic Methods, by Frederic R. Farrow [*F.*]. 2nd ed. revised. 8o. Lond. 1912. 5*s.* net. Whittaker & Co., 2 White Hart Street, Paternoster Sq., E.C.

Electric Wiring, Fittings, Switches, and Lamps: a Practical Book for electric light engineers and contractors, consulting engineers, architects, builders, wiremen and students. By W. Perren Maycock, M.I E.E. 4th ed., entirely re-written. Circuits. Over 600 illustrations. 8o. Lond. 1911. 6*s.* net. Whittaker & Co., 2 White Hart Street, Paternoster Sq., E.C.

THE EXAMINATIONS.

The Final Examination: Problems in Design.

[JOURNAL, 18th January 1912, p. 191; 25th May, p. 532.]

The Board of Architectural Education have approved the designs of the students mentioned below in Subjects I. (*b*) and II. (*b*).

Subject I. (*b*). A Terrace of Five Houses.—Mr. E. H. Gibson.

Subject II. (*b*). A Cloister with External Entrance Gateway or Tower to a Collegiate Building. —Messrs. E. H. Gibson and Wm. Voelkel.

REVIEWS.

BUILDING STONES.

The Geology of Building Stones. By J. Allen Howe, B.Sc., F.G.S. Arnold's "Geological Series." 8o. Lond. 1910. 455 *pp.* 7*s.* 6*d. net.* [*Edward Arnold.*]

The author of this work will be known to many architects who have had occasion to seek advice from the store of useful information contained in the Jermyn Street Museum, of which Mr. Howe is Curator. If excuse were wanted for this volume's publication, the fact might be cited that since the issue of *Hull's British Building Stones* some forty years ago, no work of any magnitude upon the stones of this country has been presented to the public. Though the title may suggest that the work is more for the scientist than the architect, the author has really written largely for architectural consumption, and although some knowledge of geology is necessary for its complete appreciation, even to those who cultivate a studied ignorance of scientific subjects, the work remains a valuable book of reference for use when the employment of unfamiliar stones is in prospect, extending its confines to even a short description of foreign stones. Though the author disclaims any attempt to describe and identify every kind of stone, the following transcript will indicate the essentially practical character of the book, p. 219–20:—"Ketton Stone, Rutlandshire. Three very distinct varieties of stone are obtained from the Ketton Quarries, but there is only one to which the appellation Ketton Stone can properly be applied. . . . It is a splendid stone for strength and durability. The thickness of the bed is 3 to 4 feet; blocks 2 feet to 2 feet 9 inches on bed and 9 feet long may be obtained." Then follows a list of some of the important buildings where the stone has been used, followed by a differentiating description of the other two varieties referred to.

Mr. Howe begins his treatise by describing the minerals of which rocks are composed. Pages 35 to 111 are devoted to granites and allied stones and 112 to 172 to a description of sandstones and grits, while the next hundred pages deal with that important section—the limestones. The above sections of the book, in particular, are very freely illustrated by sections and diagrammatic maps, showing at a glance the localities of the various stones, which should be a great aid in specifying stonework in unfamiliar districts. Further, a number of excellent plates, showing actual magnified sections of stones to the same scale (30 diameters), greatly enhance the value of the text. The sections give a great insight into the structure and distinctive differences between various stones, and the reviewer may perhaps be allowed to remind readers that the R.I.B.A. Library contains a volume of these photographs, which can be readily purchased through the Board of Education.

An account of slates and other stones occupies the succeeding sixty pages, which are followed by a chapter, which should be of especial interest to architects, on the Decay of Building Stone, p. 333 to 361. The last chapter gives a valuable account of the tests made upon stones. Mr. Howe points out that architects but seldom require tests on stones. The laborious nature of those tests and the lack of suitable standards in the matter of quality are perhaps a sufficient excuse for their omission by the overburdened practitioner at the present day; but the constantly recurring cases of decay in comparatively new stonework, turning to dust and ashes the highest sculptural effort and the crowning glories of our profession, putting aside any sordid question of cost, should make the artist only too ready to join hands with the author in his plea for some public investigation into the properties of all stones suitable for architectural work, as has been done in other countries. The volume concludes with a useful list of the most important quarries in this country, a short bibliography, and that essential feature of all serious books—a good index.

Mr. Howe's work has been long in coming under our notice, but perhaps we may make some amends by unreservedly commending it to all interested in building stones.

ALAN E. MUNBY [*A.*].

JERUSALEM.

The Story of Jerusalem. By Col. Sir C. M. Watson, K.C.M.G., C.B., &c. Illustrated by Geneviève Watson. "Mediæval Towns" Series. Sm. 8o. Lond. 1912. 4*s.* 6*d. net.* [*J. M. Dent & Sons, Ltd.*]

Sir C. M. Watson describes in his preface the plan of his little book on this very vast subject, and endeavours to confine his attention to a suitable résumé of the mediæval history of the place in order to bring it within the lines of Messrs. Dent's "Mediæval Towns Series" of handbooks. However, he finds it quite impossible to explain the enormous importance and interest of the city during the middle ages without copious reference to still earlier epochs. Just about half the book is consequently filled with ancient history preceding the Crusades.

Sketches of Jerusalem history culled from the standard authorities and worked up into a consecutive whole are intended for popular use, and must not perhaps be criticised too closely from a student's point of view. Sir C. M. Watson has read his *Palestine Pilgrim's Texts* with great advantage, and concludes his extracts with a reference to the perhaps little known *Itinéraire* of Chateaubriand, that very interesting description of the Holy City when the old Turko-Egyptian life was giving place to modern conditions. The historical past of Jerusalem is perhaps a somewhat trite subject, and few of the world's centres have given rise to so voluminous a literature; certainly no chronological history has ever been threshed out and reduced to system to a greater extent, and consequently there is but little room for any divergence from the received opinions of students.

Sir C. M. Watson is perhaps a little biassed—as so many people seem to be at the present day—against the great and central feature of all mediæval history in Jerusalem, the beginning of the Christian Legend and its great monument of the Holy Sepulchre. He passes rapidly over the whole subject with the remark that the two "churches of Constantine have entirely disappeared, with the exception of a few pieces of masonry, which may possibly have formed part of them, and even their form is not known" (p. 123). He also states in another place that "the city as it existed in the time of our Lord has been completely destroyed, and in some places lies many feet below the level of the present streets." The Holy Sites are therefore "not to be regarded as authentic, but rather as pictures . . . to the minds of those persons who, like doubting Thomas, cannot believe unless they see" (p. 100). Such a summary method of disposing of these matters which have occupied the attention of learned men in past times, and are still considered not beneath the notice of modern scholars, doubtless meets with the assent of the average European and American tourist of modern days, but will perhaps have less influence with a more thoughtful visitor.

To pass over the remarkable discoveries made on the Holy Sites during the past twenty-five years without comment is certainly to ignore the monumental history of Jerusalem in its most interesting aspect. But perhaps it is unreasonable to expect much enthusiasm about the remains, for instance, of the Martyrion, preserved within the Russian church of the Pretorium, in anyone who has not made a special study of Byzantine art and history.

Passing to a later period than the third century, Sir C. M. Watson appears to advance a novel and original idea about the famous church of the Presentation, built by Justinian, in Jerusalem. He is perhaps the first person to suggest that "its position is marked by the building known as the Cœnaculum or Tomb of David, a little way outside the Sion Gate" (p. 127). But unfortunately for Sir C. M. Watson's identification—which, by the way, he does not support by any authorities—the very meaning and idea of Justinian's great church would have been lost if it had been placed on the site of the Cœnaculum. The church built by Justinian was intended to commemorate the touching legend of the "Presentation of the Blessed Virgin Mary" in the Temple, and of her reception there when three years old, and her entertainment by the angels. We must therefore look for traces of this building—if any exist—on its traditional site at the south end of the Haram enclosure, and leave the Cœnaculum Holy Site without any addition to its already overburdened collection of associations.

Another criticism must be passed on the topographical portion of this little book. The description of the Muristan as it existed before the deplorable alteration into a hideous and vulgar modern shop-bazaar, is in the main correct, but there is no reason to suppose that the modern church of St. John Baptist at its south-west corner stands on the site of the great church of the Hospitallers, and the antiquity of the undercroft or crypt is very doubtful. The original church of St. John's Order may have been the large building, all traces of which were destroyed by the Greek Convent when building their hideous bazaar some ten years ago.

On page 313 a reference is made to the apse of the ancient church of Sancta Maria Latina, which now constitutes the Armenian chapel of St. John in the parvis of the Holy Sepulchre. This is perhaps the first time this interesting relic has been referred to by any writer on Jerusalem since it was identified by the author of this review nearly twenty years ago on his first visit to Jerusalem. This, like many other curious minor details about the most marvellous of mediæval cities, is the kind of thing which escapes the notice of the casual visitor, and can only be known to the actual resident in such a place, whose repeated investigations often lead to unexpected results. Jerusalem is in fact a place of constant surprises, and the variety of its aspects, whether archæological or modern, is sufficient to afford study and entertainment for a far longer period than is ever usually devoted to a stay within its boundaries. The various human types which have lodged within the different quarters of the city or its suburbs, even for the past hundred years, have impressed a certain character upon their immediate surroundings, and consequently imparted a national style to their different properties. One can wander from an Abyssinian mud village into streets of gloomy Turkish houses, or from the crowded market street of Polish Jews into an Armenian Convent. One passes direct from an Orthodox Monastery into the precincts of their hated rivals the Franciscan Friars, and in addition to the demarcations of race and religion one finds an endless variety of circumstances affecting the historical monuments within these several properties.

The Moslem conquest of Jerusalem in 637 seems to fascinate Sir C. M. Watson, and his references to Arab historians and the monuments of the Haram are well chosen for the illustrations of this side of the city's history. This is a very important addition to a book of the kind, for the majority of European visitors, and perhaps the majority of readers, are too much impressed with the Christian associations, or the still older Biblical ones, to attach much importance to the fact that this is the Holy City of the East, only second to Mecca in the Moslem estimation. An interesting note upon the removal of the "Kibla" from Jerusalem to Mecca by Mohammed himself is made on page 132.

An excellent index is provided to this *Story of Jerusalem*, but a singular absence of the words "Jew," "Jewish," is noticeable. The same may be said for the book itself; it seems not a little singular that Sir C. M. Watson should have referred so little to that great element in the population all through the ages—mediæval and modern—of the Jewish race. But then, perhaps, the 50,000 Jews who now crowd the city are too modern a feature to fall within the scope of an historical essay.

The illustrations of the book are unfortunately very inadequate for the purpose. If they had all been as good as the very charming frontispiece the value of the book would have been immensely increased.

Taken as a whole this little book answers an excellent purpose of providing the intending tourist to Jerusalem with an historical summary of a condensed and yet readable kind. The material is well arranged and comprehensive, and the convenient form of Messrs. Dent's publications, their elegant typography and cheapness insure a popular reception and general appreciation. One of the best things about the book is an admirable table of contents, which at a glance gives the reader a succinct view of the whole course of Jerusalem history.

Cyprus. GEO. JEFFERY, F.S.A.

MINUTES. XV.

EXTRA GENERAL MEETING (ORDINARY), 3rd June 1912.

At an Extra General Meeting (Ordinary), held Monday, 3rd June 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 21 Fellows (including 4 members of the Council), 39 Associates (including 1 member of the Council), and 6 Licentiates—the Minutes of the Meeting held Monday, 20th May 1912, having been printed in the JOURNAL, were taken as read and signed as correct.

Mr. Francis R. Taylor, *Licentiate*, attending for the first time since his election, was formally admitted by the President.

A Paper by Mr. Wm. Woodward on "THE NEWER RESPONSIBILITIES OF ARCHITECTS AND THE CASE OF MINTER *v.* WALDSTEIN" having been read by the author and discussed, a vote of thanks was passed to him by acclamation.

The Meeting separated at 10 p.m.

GENERAL MEETING (BUSINESS), 10th June 1912.

At the Fifteenth General Meeting (Business) of the Session 1911–12, held Monday, 10th June 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 28 Fellows (including 6 members of the Council), 32 Associates (including 1 member of the Council), and 4 Licentiates—the Minutes of the Meeting held 3rd June were read and signed as correct.

The Hon. Secretary having announced the decease of Daniel Hudson Burnham, of Chicago, *Hon. Corresponding Member* elected 1910, the Meeting resolved, upon the motion of the Hon. Secretary, that the regrets of the Institute for the loss it had sustained by the death of its distinguished Corresponding Member be entered on the Minutes of the Meeting, and that a message of sympathy and condolence be addressed on behalf of the Institute to his bereaved relatives.

The Hon. Secretary further announced the decease of Sydney Smirke, *Fellow*, elected 1888, and having referred to his generous donations to the Library during the past twenty-two years, the Hon. Secretary moved, and it was thereupon resolved, that the Institute record its deep regret for the loss of its esteemed Fellow, and that a letter be addressed to his family sympathising with them in their bereavement.

The decease was also announced of Richard Willock, elected *Associate* 1889, *Fellow* 1909; Peter Lyle Henderson, *Fellow*, elected 1906; and William Harrison, *Associate*, elected 1882.

The following gentlemen attending for the first time were formally admitted by the President—viz. William Lucas, *Associate*; Edward Herbert Bray and Robert Francis Curling, *Licentiates*.

The Hon. Secretary announced the receipt of a number of donations to the Library [see *Supplement*], and a hearty vote of thanks was passed to the donors.

The Secretary having read the Report of the Scrutineers appointed by the Council to direct the election of the Officers, Council, and Standing Committees for the ensuing year, the President declared the candidates duly elected in accordance with the Report.

On the motion of the President a vote of thanks to the Scrutineers for their labours in connection with the elections was passed by acclamation.

The following candidates for membership were elected by show of hands under By-law 10:—

AS FELLOWS (3).

ALLEN: Ernest Gladstone [*A.* 1904].
POTT: Walter [*A.* 1888].
ROBERTS: Haydn Parke [*A.* 1907] (Worthing).

AS ASSOCIATES* (12).

ARCHER: Henry Humbley, P.A.S.I. [*S.* 1910] (Southport, Lancs).
BAREFOOT: Herbert John Leslie [*S.* 1909].
HARRIS: Royston John Keith [*Colonial Examination* July 1911] (Sydney, N.S.W.).
HEALING: John Burton [*S.* 1909] (Leicester).
HEPWORTH: Philip Dalton [*S.* 1910].
LAY: Cecil Howard [*S.* 1909] (Saxmundham, Suffolk).
NICOL: Robert Dewar [*Special Examination*] (Calcutta, India).
OWEN: Geoffrey [*S.* 1909] (Warrington).
SHEARS: Reginald [*S.* 1909].
STEDMAN: William Bernard [*S.* 1908] (Margate).
STOCKTON: Russell [*S.* 1906] (Stockport).
VOYSEY: Charles [*S.* 1909].

The Secretary announced that the following candidates, being found eligible under the Charter and By-laws, had been nominated by the Council for ad-

* Except where otherwise stated, all the candidates passed the Qualifying Examination in November 1911.

mission as Licentiates: J. A. O. Allan, E. G. Allen, W. J. Abra, F. B. Adams, F. E. G. Badger, H. J. Baigent, W. Baillie, H. G. Baker, W. Barclay, F. G. Barker, H. M. Barker, W. H. Barton, W. A. Baynes, A. L. Belcher, G. Bell, A. N. Bembridge, L. B. Bethell, W. M. Bishop, W. A. M. Blackett, W. Blackshaw, L. M. W. Bladen, H. D. Blessley, J. O. Bond, M. Botting, P. R. Bradford, E. H. Bray, O. A. Bridges, W. F. Bright, T. Brown, W. H. Browne, H. Le C. Browning, H. Burgess, S. E. Burgess, R. W. Caldwell, J. H. Cammack, J. B. Campbell, H. Cane, F. Cannon, F. R. Chalmers, F. W. Chapman, C. W. Christian, F. W. Cockle, H. A. Coldman, E. W. G. Coleridge, W. V. Cook, S. N. Cooke, C. J. Corblet, J. H. Cossar, H. Cratney, C. Crawford, J. W. Crawford, W. F. Crombie, A. F. Cutler, W. S. Dakers, F. J. Daniel, T. B. Daniel, C. F. Dawson, J. Day, H. A. C. Deckman, A. Dicken, E. W. Dyson, F. R. L. Edwards, J. P. Edwards, J. J. Eltringham, W. Evans, E. H. Evans, L. Falconer, jun., A. C. Fare, R. K. Fearnside, W. Ferguson, jun., E. F. Ferry, L. M. Field, W. Fielding, A. A. Fillary, G. H. Fletcher, H. H. Flowers, F. R. Freeman, T. K. Foggie, G. Foster, W. T. B. Foster, J. A. Fowler, A. W. de R. Galbraith, H. R. Gardner, J. G. Gamble, J. Garvie, R. M. Gibson, H. Gill, F. G. Gilling, A. C. Gillman, L. H. Godfrey, S. H. Goodwin, W. Goodwin, I. C. Goodison, A. E. Gosling, G. Gould, E. F. Goulding, J. Gray, E. F. Green, G. W. Grey, P. Grout, C. W. Hall, A. D. Hamilton, J. Hardman, A. M. Hardie, J. Harding, L. R. Harries, W. A. Harris, R. G. Hawke, A. D. Haxton, W. E. Healey, R. A. Heaton, F. Henshaw, E. H. Heazell, A. Hibbert, F. B. Hill, R. N. Hodder, G. Hodgson, P. J. C. Hofman, G. Holmes, A. R. Hollingworth, F. Housley, A. C. Hunt, J. A. M. Hunter, W. Illingworth, A. M. Ingman, J. G. Izard, C. E. Jackson, R. W. Jackson, W. H. Johnson, jun., C. P. Jones, R. C. F. Jones, S. R. Jones, C. K. Jupp, G. H. Kay, G. Keighley, S. Keighley, W. Kerr, J. W. Key, C. C. King, E. B. Kirby, P. E. C. Lain, A. G. Laskie, A. G. Latham, H. J. Laws, W. J. Leahy, J. Lemm, G. E. D. Lewis, P. S. Lewis, L. Littlewood, T. A. W. Lloyd, A. W. Lofthouse, R. B. McColl, D. A. McCubbin, C. Macdonald, J. H. McGovern, J. Mackenzie, J. Mackintosh, G. Macritchie, A. J. Madgin, J. Manuel, A. J. Marshall, F. N. D. Masters, R. Y. Mayell, A. R. Meldrum, A. C. Meston, J. Miller, J. H. H. Mitchell, W. Mitchell, J. Money, H. E. Moore, G. G. Moorhouse, G. L. Morris, W. R. Morris, R. J. Mules, P. P. Nathan, C. H. R. Naylor, F. W. Newby, T. Newell, W. Newlands, P. G. Newton, F. Nicholls, A. T. Nicholson, J. P. Nicoll, F. R. Nunn, C. Oliver, G. M. Page, W. M. Page, F. M. Palmer, jun., F. Peake, J. Percival, J. Phillips, J. E. Pluck, C. B. Powell, E. Prairie, A. G. Prentice, O. E. T. Prescott, H. O. Prestwich, H. D. Pritchett, T. S. Purdie, W. Rankin, H. T. Richardson, W. P. Riddle, C. H. Roberts, P. B. Roberts, D. W. Robertson, G. A. M. Roe, J. McG. Ross, H. E. Rossiter, E. Rothwell, A. J. Rowley, A. F. Royds, T. J. Rushton, C. T. Ruthen, T. Salkeld, L. N. Sanderson, J. T. Saunders, G. G. Schwartz, A. E. Seaman, W. Shanks, H. V. Shebbeare, E. H. Smith, G. H. Smith, H. V. C. Smith, W. C. C. Smith, S. M. Spoor, L. R. Stains, P. E. Stenning, S. J. Stephenson, W. C. Stevenson, J. E. Still, William Stirling, T. T. Storry, J. Strong, E. Taylor, H. Taylor, W. A. Tebbs, E. J. Thomas, O. T. Thomas, C. F. Thomas, A. Thomerson, A. J. Thompson, J. Thomson, A. H. Thomson, J. M. Thomson, T. P. Tinslay, M. Tobias, S. E. Tomkins, C. W. Tomlinson, C. Triffitt, A. H. Tucker, H. P. Tufnail, J. K. Vinycomb, F. G. Waddell-Dudley, W. Wade, R. Wainwright, J. C. Walker, W. Walker, J. Walsh, C. J. Ward, F. J. Wass, A. C. H. Watkin, D. Watney, J. Webb, H. Webber, F. N. Weightman, H. J. Welch, R. Wemyss, S. I. Weston, T. K. White, R. Whyte, J. H. Willett, J. St. C. Williamson, A. G. Wilson, W. McN. Whyte, A. F. Wicksteed, H. P. Williams, J. M. Williams, J. R. Wills, W. F. Wills, R. H. Willson, A. V. Wilson, J. Wittet, F. H. Witts, F. Worrow, H. J. Worrow, J. E. Wrathmell, J. R. Wray, C. H. C. Wright, James Young, Walter Guy Young, J. G. Aberdour, G. P. Allen, W. H. Bailey, L. W. Barnard, B. J. Belsher, J. Bennett, F. R. Betenson, F.S.I., G. E. Bissell, J. C. Bourne, G. H. Briggs, S. M. Brooks, C. W. Callcott, A. H. Church, C. R. R. Clark, G. F. N. Clay, B.A.Cantab., J. D. Coleridge, H. L. Colville, E. T. Cook, B. J. F. Cox, H. R. Creighton, W. Davidson, Owen Jones Student 1904, I. S. Davies, G. W. Davis, W. Dewes, A. H. Dight, J. Duff, P. G. Fry, A. George, A. Gilbertson, E. H. H. Griffith, E. Gunson, W. F. Harber, A. C. Havers, E. G. Heathcote, S. G. Hewitt, J. Hook, F. Kempster, H. G. M. Laing, J. T. Lawrence, W. L. Lucas, B.A.Cantab., R. Martin, H. G. McLachlan, C. J. Newman, C. H. Norton, S. H. Partridge, C. H. Pullin, G. B. Robertson, President of the Institute of Architects of N.S.W., H. M. Scrivener, F. H. Shann, T. W. Sharpe, E. J. Shelmerdine, H. T. Sidwell, C. Sinclair, M.A., F.S.A.Scot., C. F. Skipper, W. A. Smith, D. G. Tanner, S. J. Tatchell, W. Taylor, E. A. Toombs, C. W. Townsend, J. H. Waterworth, W. H. Webb, W. Williamson, T. Winder, Assoc.M.Inst.C.E., F. Windsor, B. Abercrombie, J. S. Adkins, P. K. Allen, F. V. Baars, C. O. Baines, T. H. Baker, T. C. Barker, F. Bell, J. F. C. Bell, T. M. Bevan, H. R. Bird, E. R. Birks, J. Bowley, W. W. Bull, A. W. Bungard, A. J. P. Carrington, A. Chausse, S. Constanduros, H. Cordery, J. W. Denington, S. Dexter, C. T. Ewing, W. Finlayson, J. E. Forbes, W. H. George, G. F. Grimwood, J. M. W. Halley, H. I. Hands, T. F. Hewitt, E. M. Hick, D. H. Hunter, C. H. Isaacs, J. H. Jacques, J. A. James, T. Jenkins, J.P., S. Jupp, C. King, G. J. J. Lacy, A. Landstein, M. G. Martinson, H. Mennie, J. G. Mitchell, T. J. Morgan, W. J. M. Morrish, F. C. Moscrop-Young, J. Neill, E. Ogden, S. G. Parr, F.S.I., J. A. Payne, E. L. Percival, H. R. Poulter, G. Povey, E. W. Ralph, A. Rangeley, S. W. Richards, B. Sattin, B. Shadbolt, J. Shanks, L. W. Simpson, R. Spencer, A. J. Stedman, J. Steel, D. McK. Stoddart, J. D. Tate, A. J. Thomas, S. G. Walker, D. West, F. White, E. Wilkins, H. J. Wonnacott, P.A.S.I., F. H. Wrench, Assoc.M.Inst.C.E., G. L. Wright, L. S. Youngman, C. Alder, F. Baker, H. L. Baker, W. J. Ballard, R. B. Barker, W. V. Betts, J. S. Boyd, G. C. Copestick, H. Elwig, jun., F. S. Hammond, J. W. B. Harding, J. E. Henderson, F. J. Hobson, J. A. T. Houston, G. Hutchins, M. T. E. Jackson, T. Martin, I. Massey, A. Y. Mayell, A. E. Pearson, C. Pickford, W. H. Poole, A. F. Preston, F. H. C. Rimmington, W. P. D. Stebbing, A. P. Stokes, J. E. Stout, F. R. White, W. H. Woods, W. H. Adams, C. M. C. Armstrong, J. A. Arnott, F. G. Ashwell, F. J. Atkinson, H. W. Ayles, G. H. Barrowcliff, T. W. Biggs, G. Bloore, S. O. Blythe, H. H. Brown, J. W. Burrows, H. W. Burton, M. T. Cantell, A. O. Cave, H. J. Cawte, H. Cheetham, J. T. Coulson, H. G. Coyne, J. A. Cragg, G. A. Craig, J. Cran, jun., W. H. Crofts, H. H. Danby, H. E. Dane, W. C. Davidson, J. H. Dawson, C. F. W. Dening, J. E. Douglas, L. Dowie, E. T. Dunn, G. Edwards, T. W. Fairbrother, R. C. Fry, W. Fullerton, J. Galt, J. H. Gask, P. Gaskell, R. W. K. Goddard, J. B. D. Gorman, G. D. Hamilton, F. Hatch, T. F. Hawkes, J. H. Higgs, H. Hill, W. E. Horsfall, F. J. Horth, J. D. Hunter, E. N. Johnson, F. R. Laverick, C. O. Law, E. W. Leeson, G. H. Lovegrove, G. Maddock,

C. Mann, P. L. Marks, W. A. H. Masters, J. Mercer, W. E. Monro, J. Morris, R. S. Oldacre, C. B. Pearson, L. G. Pearson, J. A. Percival, E. J. Pomeroy, J. H. Porteous, J. C. Prangnell, E. T. Richmond, T. H. Russell, M.A.,Cantab., A. P. Saville, F. Seale, P. H. S. Shepperd, J. W. Smith, W. W. Snailum, W. Southall, T. L. Taylor, E. G. Theakston, E. M. Thomas, E. Tough, H. B. Tylor, B. F. G. Wakefield, H. W. Wakeman, P. Walker, G. Weald, J. R. Whitaker, W. D. White, S. Wilkinson, W. P. M. Willcox, T. M. Wilson, A. S. Wood, W. H. Wrightson, C. B. Young, T. J. Young, A. E. Anderson, A. G. Andrews, J. P. Baker, F. J. Bellamy, E. C. H. Bird, W. G. Buck, E. E. Carver, G. B. Cobbett, R. Coulson, G. P. Crane, W. T. Cresswell, H. G. Crothall, J. Dallas, S. M. Dempster, A. St. J. Diamant, W. L. Dolman, H. Dyball, W. F. Edwards, H. Q. Farmer, W. A. Finch, R. H. Fletcher, J. Forbes, J. Forster, A. E. Gurney, E. E. Hall, W. E. Haslock, E. Hooley, H. Horton, W. S. Huxley, W. H. James, J. J. Jones, W. S. Jones, P. A. Lamb, P. Lancaster, S. H. Langley, B. M. Lloyd, W. Lockwood, W. R. Macdonald, C. T. Marshall, D. S. McIlroy, J. McIntyre, J. B. Merson, W. J. Mountain, G. Newton, jun., H. T. O'Rourke, E. Palser, S. W. Parker, J. S. Paton, M. Price, J. A. Reid, R. M. Rigg, R. W. Sampson, J. A. Souttar, J. B. Steel, J. H. Stephens, J. C. Stockdale, A. J. Toomer, W. Tweedy, B. H. Wakeford, T. Weatherley, H. A. Wright, A. F. Allen, T. Ashton, P. Bauhof, C. R. Bayley, M. B. Bennett, G. G. Bentley, W. S. Bishop, S. W. Bradshaw, H. M. Brown, W. H. Bulloch, F. T. J. Burrows, V. Calvert, E. P. Cameron, J. Carrick, G. Carter, G. T. Caryer, H. H. Clark, E. R. L. Clowes, E. W. Coldwell, E. W. Collins, A. Dale, C. R. Davy, G. K. Deakin, N. W. De Courcy, H. H. G. Denvil, B. P. Dwyer, C. W. English, N. Evill, A. J. C. Ewen, W. C. Fairer, V. A. Flower, J. H. B. Foss, C. H. Freeman, A. L. Grote, E. E. H. Hamlyn, A. B. Hayward, S. A. Heaps, W. J. Heard, C. H. Hignett, H. T. Hodges, A. N. W. Hodgson, W. P. Horsburgh, J. P. Hunter, J. C. Ireland, G. W. Lord, E. L. Lunn, G. F. Miller, R. P. Oglesby, C. R. Overy, W. E. Paul, F. H. Price, F. G. Price, N. Read, N. Richley, A. Rigby, W. A. Ross, J. S. Ruchwaldy, H. O. Samson, G. T. Scott, M. G. Shaw, J. M. Sheppard, C. F. Short, E. Sprankling, J. E. Stott, J. Stuart, W. A. Sugden, W. H. Sugden, C. E. B. Sutton, N. Vaux, H. H. Walder, T. Wall, W. M. Weir, A. W. West, W. W. Wheston, J. Williamson, A. Winstanley, H. J. Yorke, E. H. Abbott, F. E. Adams, A. G. Adkin, C. A. Aish, C. G. Baker, H. A. Cheers, C. E. Clarke, F. C. Clemesha, G. L. Coates, G. Colles, W. C. Cooper, F. A. Cox, F. H. Darke, W. T. Deacon, C. De Adlersparre, F. C. Dixon, H. Druery, R. J. Edmondson, S. Evans, T. M. Forrest, R. A. Fuller, C. R. B. Godman, F. M. Hammond, J. H. Heywood, H. Higginson, E. T. Johns, R. P. Jones, H. Kirkley, G. F. Lake, W. Macpherson, J. H. Mangan, W. H. H. Marten, J. M. Mathers, S. McLauchlan, T. McMillan, J. G. P. Meaden, S. H. Meyers, J. Murray, T. E. Murray, G. H. Norman, H. Norman, G. Ogden, W. J. Pamphilon, W. Panton, J. Parish, G. P. Powis, F. E. B. Ravenscroft, H. V. R. Schofield, E. F.-E. Seaman, S. G. Short, W. F. Slater, J. W. Smart, A. E. Starkey, W. B. Stefanoni, W. B. Stonebridge, H. J. Sturges, F. W. Taylor, J. T. A. Taylor, W. H. Thwaites, J. E. Todd, A. E. Turner, J. G. Wiles, A. Williamson, A. E. Woodhouse, G. T. Young, A. Bale, F. Berkeley-Miller, A. S. Cox, L. F. Crane, R. H. Cunliffe, J. Davidson, W. Dixon, A. J. Driver, E. A. Fermand, F. W. Finchett, H. Gardner, H. L. Geeson, T. Gregg, W. Griffiths, J. O. Harris, E. L. Harrison, F. Haswell, E. B. Hoare, G. J. F. Hookway, D. E. A. Horne, A. G. Humphry, A. H. O. Lawrence, the Hon. A. McGarel-Hogg, D. G. McIntosh, D. McKerrow, A. P. Miller, S. P. Morter, J. R. Newton, J. H. F. North, A. J. Phillips, W. Pollard, B. A. Porter, H. S. Rhodes, A. E. Richardson, J. E. Richardson, W. B. Rolfe, A. Round, G. H. Stevenson, R. T. Tilley, J. H. Wall, M. Wheeler, F. Willey, J. C. Wynnes, E. C. Aldridge, F. Anderson, H. L. Anderson, C. H. Andrews, E. Attree, E. O. Banks, F. Barclay, F. R. Bates, P. L. Best, J. A. Black, J. M. Bottomley, E. J. Brett, S. P. Brinson, G. L. Brown, M. J. Burke, J. A. Carfrae, D. Christie, W. L. Clarke, C. A. Clayton-Greene, L. W. Clifton, R. F. Curling, T. H. Dobson, J. F. Dodd, R. C. Donaldson, F. C. Evans, H. M. Fairweather, G. T. Forrest, E. Forshaw, R. H. Fowler, P. B. F. Freeman, F. J. Garlick, T. Garrett, W. H. Gibson, J. F. Goodacre, W. S. A. Gordon, G. Gray, J. J. Hackett, J. L. Hall, G. M. Hay, R. G. Heape, C. H. R. Henman, G. E. Hinchliffe, H. W. Inott, G. Jamieson, W. W. Kenworthy, E. C. Lawrence, W. W. Longbottom, R. T. Longden, A. Loveday, D. A. Lumsden, W. Mackinnon, F. H. Mansford, A. J. Marshall, A. E. Martin, W. Matson, E. W. Meredith, O. P. Milne, H. S. Morris, T. R. W. Mossman, J. Murray, G. R. C. Muschaweck, S. W. Neighbour, B. L. Newman, J. R. Poyser, A. S. Prior, A. G. A. Quibell, W. H. Raffles, A. S. Reeves, J. G. Reynolds, F. D. Rice, A. W. Roques, F. M. Royle, A. D. Sharp, W. Shaw, T. F. Shepheard, D. Thomson, F. C. Uren, W. J. Warde, G. Ware, B. H. Webb, W. J. Wells, G. White, L. H. Wilkinson, J. C. Williams, T. A. Williams, W. J. Wilsdon, A. W. Worrall, O. Wright, A. E. Yeman, E. R. Walker, F. R. Waller, K. Ward, L. C. Webb, J. White, G. Womersley, J. A. Wright, C. G. Agate, J. Armour, jun., S. Bailey, J. Barbour, T. P. Bennett, J. Bevan, E. C. Bewlay, G. A. Birkenhead, W. Bond, G. H. Bott, H. H. Bridgman, A. H. Brown, G. Brown, H. T. Buckland, E. Burke, A. B. Burleigh, T. Burnley, J. H. Burton, T. A. Buttery, A. S. Carter, G. A. Chapman, J. W. Charles, J. W. Claxton, W. Cowan, G. A. Cox, W. H. Creaser, S. R. Day, E. A. Dewdney, J. Ellwood, J. H. Evans, D. M. Franklin, J. M. Froud, F. W. Gardiner, E. Garrett, C. R. Gilchrist, W. C. F. Gillam, F. Goddard, E. Greenleaves, F. Hammond, H. G. Harmer, W. A. Harvey, W. Haywood, E. Haywood-Farmer, H. Heathman, H. E. Henderson, T. V. Henshaw, H. Higgins, H. S. Hiley, F. B. Hooper, W. G. Horseman, C. W. Horser, A. Howard, E. A. Hunt, W. Hunt, C. D. James, C. H. Kempthorne, W. Kennedy, W. H. Knee, J. H. Lang, H. H. G. Lewis, W. M. Lewis, W. T. Lowdell, E. A. Mann, A. C. Martin, R. Matthews, W. D. T. Munford, S. Needham, C. R. Newborn, F. G. Newton, E. O'Brien, F. E. Openshaw, P. G. Overall, G. F. Pennington, P. Phipps, B.A.Oxon., F. N. Reckitt, M.A., T. J. M. Reid, E. F. Reynolds, H. E. Rider, R. Rigby, J. H. Rutherford, J. A. Sant, J. J. Seanor, W. R. Sharp, A. E. Sheppard, C. P. Sherwin, H. W. Simister, J. F. Smith, D. A. Stewart, E. Sykes, G. W. Tanner, P. H. Thomas, C. C. Thompson, C. E. Thompson, C. Thorp, F. Thorpe, G. E. Tonge, E. J. Toye, W. N. Twist, T. B. Wain, J. W. Abraham, B. S. J. Aga, J. S. Alder, S. G. Alexander, F. A. Allen, S. Allen, F. W. Andrew, R. Annan, A. F. Anoni, H. M. Appleyard, H. Ascroft, R. F. G. Aylwin, A. G. Bailey, H. Baily, W. H. Baines, E. C. Ball, J. Ballantine, T. M. Banks, C. S. Banks, A. J. Barclay, F. Bargman, P. D. Barker, W. C. Barker, W. Barlow, R. R. Barnett, H. S. Barrett, C. A. Battie, H. L. Beckwith, W. Bell, T. F. Bell, H. S. Benison, J. E. Benton, P. R. Berry, D. A. Beveridge, J. Binns, E. E. Bird, R. P. Blakey, L. Blanc, L. A. Blangy, F. Bleasdale, H. Boden, P. Booth, C. C. Bougatsos, E. E. Bowden, C. W. Bowles, J. Briggs, J. S. Brooks, D. M. Brown, J. Brown,

W. Brown, A. C. Bunch, J. F. Burkinshaw, W. H. Burnet, J. Burns, J. G. Burrell, E. Butler, G. F. Byron, W. R. Cantrell, W. M. Carter, G. Cash, F. W. Cattermole, A. C. Caudwell, E. W. Chennells, P. A. Chenoy, B. Chippendale, E. S. Clarkson, J. Clayton, J. S. Cleland, G. S. Coburn, A. E. Cockerell, T. Cockrell, J. A. Coe, A. E. Cogswell, J. H. Cogswell, A. G. Cole, F. G. Cole, H. Collings, E. J. Conway, H. F. T. Cooper, T. E. G. Cooper, W. F. Copp, C. E. Cowan, A. Cowman, C. M. Crickmer, J. G. Crone, J. Crouch, V. J. Cummings, J. Dall, A. Davies, E. B. Davies, W. J. Davis, H. Dawson, W. C. Dawson, B. C. Deacon, F. M. Deakin, J. M. Dingle, H. S. Dixon, M. E. D. Dixon, R. Dixon, E. J. Dolman, P. R. Donald, W. L. Dowton, F. G. Drewitt, J. B. Drower, F. M. Dryden, A. F. Duke, W. B. Dukes, L. L. Dussault, H. T. Earl, S. E. Eaton, H. Eddison, C. H. Edwards, L. G. Ekins, T. Ellershaw, E. M. Ellis, R. G. Elwes, C. Ewan, R. Ewan, jun., A. H. Fagg, W. G. Fagg, J. W. H. Farrow, A. P. Fawckner, H. W. Featherstone, B. K. Feild, J. Ferguson, C. W. Ferrier, T. E. Fisher, J. J. Follett, H. W. Ford, T. W. Ford, F. L. Forge, C. Frankiss, S. French, A. Fyfe, W. G. Galloway, W. P. Gilbertson, E. F. Gilman, W. H. Glover, W. Goldstraw, H. H. Goodall, H. Gordon, R. C. T. Gordon, G. R. Griffith, H. T. Grove, F. E. Haarer, A. G. Hall, N. Hampson, W. T. Hanman, J. W. Hanson, G. D. Harbron, T. E. Hardy, E. G. Harrison, A. Hart, R. Harvie, E. Hastie, R. D. Havard, H. C. Hawkes, A. T. Heathcote, P. M. Helbronner, W. C. Henning, S. G. Highmoor, P. J. Hill, A. Hirst, F. F. Hobson, E. E. Hodder, A. C. Hodges, A. J. Holbrook, A. E. Holbrook, G. H. Holdgate, F. B. Holt, E. G. Holtom, A. A. Hunt, J. E. Inglis, G. H. Isitt, A. James, W. Jane, G. H. Jenkins, J. R. Johnstone, J. T. Johnstone, H. G. Jones, E. W. Keech, G. N. Kent, W Kerr, A. S. Killby, F. M. Kirby, S. R. Kirby, C. J. Kirk, J. F. Lancaster, O. Langbein, H. G. Lazenby, E. A. Lead, W. W. Lee, W. J. H. Leverton, A. S. R. Ley, A. R. Lindsay, A. Lingard, O. C. Little, F. Littlewood, H. W. Lockton, H. W. Long, W. T. Loveday, F. J. Lucas, T. W. Ludlow, H. A. Luke, W. W. Mabson, T. I. McCarthy, W. McClelland, H. C. McCulloch, G. McGarva, J. P. McGrath, L. Maggs, E. H. Major, C. W. Maplesden, W. Marchment, M. Marsland, F. W. Martin, A. T. Martindale, F. W. Masey, O. C. Mather, W. A. Maylett, F. H. Mercer, A. A. Messer, C. Messervy, G. Metson, J. A. Mettham, J. D. Michell, R. A. Mill, W. Mills, T. Monkman, H. Monson, J. Morley, W. R. Mosley, K. L. Murray, L. M. Newell, H. Oakley, J. G. Oatley, W. J. Oliver, F. H. Overmann, J. Page, A. E. Painter, R. A. Parkin, E. H. Parkinson, O. P. Parsons, A. C. Paulin, E. H. Payne, D. Peacock, J. Peddle, G. Pemberton, A. J. Penty, A. E. Pett, A. M. Philips, J. W. F. Phillipson, F. D. Pipe, S. Piper, E. A. Pollard, A. F. Poole, V. S. R. Poole, G. Pooley, B. A. Poulter, R. S. Powell, W. J. Prichard, J. H. Puntin, H. C. Queree, C. M. Quilter, H. Quinton, A. Reaveley, A. A. Reeve, J E. Reid, R. Rich, A. C. Ridsdale, E. Rimmer, G. A. Roberts, R. Robertson, F. J. Robinson, J. W. Rodger, W. H. Ross, J. E. Rowlands, C. E. Sadler, J. C. H. Sandbach, I. Sanders, H. T. Sandy, J. Sarvis, J. Saunders, R. Savage, H. C. Scaping, R. S. Scholefield, G. Sedger, A. E. Shervey, W. K. Shirley, J. Sidey, C. J. W. Simpson, W. B. Simpson, T. Sinclair, F. P. Skipwith, G. E. Smith, G. T. Smith, J. B. P. Smith, A. Soutar, J. C. S. Soutar, A. Sparke, W. T. Springall, K. B. Spurgin, W. R. Spurr, J. Stables, W. Stainer, J. R. Stark, W. Steel, E. Stevens, E. G. Stevenson, J. Stevenson, H. Stewart, H. S. Stewart, P. J. Stienlet, C. S. Stone, H. Sully, G. A. Sutherland, J. A. Swan, H. Swanwick, J. Sykes, J. S. Syme, J. B. Tansley E. R. Tate, T. J. Tatham, R. M. Taylor, T. H. Taylor, W. H. Taylor, E. H. Terry, E. J. Thomas, T. Townend, A. Travis, H. Vaughan, F. T. Waddington, P. J. Waldram, C. Walker, W. B. Wall, J. Warburton, R. S. Wardle, A. E. Watson, W. P. Watson, F. S. Webber, W. Weir, G. H. Wenyon, C. West, J. White, J. B. Whyte, E. H. Wigley, S. Wilkinson, S. Williams, J. H. Willis, A. Wilson, E. R. Wilson, G. T. Wilson, J. H. Wilson, C. C. Winmill, G. G. Woodward, F. E. Wootton, J. B. Wride, T. Yates, A. Young, W. Young, S. Grundy, jun., F. Jamieson, S. W. Whitmore, W. H. Ford, G. A. J. Hart, A. E. Seaman, J. G. D. Hoets, R. V. T. Sewell, A. T. Nicholson, H. T. Jones, A. E. Brooks, E. Garlick, A. G. Cross, A. E. Martin, E. W. Burnett, A. B. Black, G. E. Ellis, C. H. Dyer, E. Meek, C. T. Good, R. A. Fordham, J. Morris, H. B. Watson, C. Masey, D. L. Allan, D. W. Baxter, W. Clark, G. A. Pyott, A. A. Symon, D. Thomson, D. Sharpe, W. D. B. Keith, J. Stedman, H. Hyams, A. H Scholte, W. A. Forsdike, S. E. Burgess, J. Brown, N. B. Pearce, D. Webster, H. H. Hunt, J. H. Stanford, C. Holdsworth, G. William, J. W. Paterson, J. C. G. Davies, W. F. Davies, A. F. Evans, F. G. Faunch, J. R. Gariepy, J. Lowson, J. Manuel, W. Gill, F. B. Parsons, A. E. Brooks, J. Davidson, F. L. H. Fleming, H. T. Jones.

The President, referring to a motion on the agenda in the name of Mr. Sydney Perks, F.S.A. [*F.*]—viz. "That a full and proper report of the debate at the Annual General Meeting on the 6th May with reference to St. Paul's Bridge be printed in the JOURNAL"—announced that, having regard to the fact that the Chairman of the Meeting had exercised the discretion vested in him under By-law 61 as to the publication of the report, the Council had come to the conclusion that the motion was out of order and could not be proceeded with.

With regard to the second motion on the Agenda in the name of Mr. W. R. Davidge [*A.*], viz. :

> "That, having regard to the report of the Honorary Auditors for 1911 and to the state of the Institute finances, it is desirable, in the opinion of this Meeting, that a Committee should forthwith be appointed with power to inquire generally into the finances of the Institute and all matters relating thereto.
>
> "The Committee to consist of three members of the Council and three members of the general body, with power to add to their number; the Committee to have access to all documents and the services of all officers and advisers of the R.I.B.A.; to make any inquiries they may deem advisable, and to report in writing, with any recommendations, to the Council of the Royal Institute; the report to be issued with or printed in the JOURNAL and submitted for discussion at a Business or General Meeting of the Institute."

The President ruled the motion out of order on the ground that under Clause 16 of the Charter the control of the funds of the Institute was vested in the Council, and that a Committee of the Council called the Finance Committee had the financial affairs of the Institute at the present moment under consideration with a view to making a report thereon. He promised, as far as he was in a position to pledge the new Council, that when the Report of the Finance Committee was completed the document should be communicated to the General Body.

The proceedings closed and the Meeting terminated at 8.45 p.m.

BASIL CHAMPNEYS, B.A. Cantab.
Royal Gold Medallist 1912.

Architectural Library

T. Raffles Davison, delt.

Slindon Church, Staffs (Basil Champneys, Architect).

THE ROYAL GOLD MEDAL, 1912.

Presentation to Mr. Basil Champneys, B.A.Cantab., Monday, 24th June 1912.

ADDRESS BY Mr. LEONARD STOKES, *President*.

WE meet to-night, as you know, to do honour to our very distinguished *confrère*, Basil Champneys, by handing to him the Royal Gold Medal which, on our recommendation, has been conferred upon him by our Royal Patron and King—George V. The Royal Gold Medal, it is not necessary to remind you, is the highest honour—architecturally speaking—that can be bestowed upon a member of our profession, and we have only to recall the names of former recipients to find that they belong to men who, if alive, are honoured, respected, and admired by all of us; or, if dead, are acknowledged to have been the great men of the age they lived and worked in, and it is only necessary to mention such names as Cockerell, Barry, Donaldson, Smirke, Tite, Owen Jones, Scott, Fergusson, Street, Sharpe, Penrose, Butterfield, and Bodley, as amongst those so honoured by their Sovereign, to prove the statement—if proof is necessary.

On these occasions it is usual for your President to remind the meeting—our memories being so short—of the main features connected with the Medal and its history, and to say a few words about the career of its recipient: we had better, therefore, follow that course to-night.

In the year 1848 Queen Victoria, who had about ten years previously graciously consented to become Patron of our Institute, resolved to grant and confer annually, at the recommendation of the Institute, a Royal Gold Medal for the promotion of architecture. This Medal

was awarded in that year to C. R. Cockerell, and the award has been made without interruption in each succeeding year—except in the year in which Queen Victoria died—to some distinguished man; not always an architect, as we readily admit that there are others who by their works can and do promote architecture—for example, literary men, who by their books and pens greatly advance the cause we have all so much at heart, and they have on several occasions received this Medal. Again, the recipient need not be an Englishman; Italians, Austrians, Frenchmen, Germans, Dutchmen, and Americans have all received the Medal. So far, however, it has not gone to an inhabitant of one of our great colonies, not because excellent work is not being done there, but perhaps because they are mostly of such vast extent, and so far off, that we on this side have not been able to get sufficient information to enable us to submit the name of a Colonial to our Sovereign. I hope, however, now that travel is getting every day easier, and inter-communication more complete, that it may not be long before the Medal goes to one of the great Dominions beyond the seas.

[Photo. Bedford Lemère & Co.

JOHN RYLANDS LIBRARY, MANCHESTER
(Basil Champneys, Architect).

And now we turn to the gentleman upon whom it has pleased his Gracious Majesty to bestow the Medal this year. Though not a member of this Institute, and consequently not quite so often seen in this room as we could wish, yet Basil Champneys, at any rate in his work, is well known to all of us; and those whose memories can carry them back, say, a quarter of a century or more, will with one accord proclaim that his distinguished career has been followed throughout with interest and admiration, and that the honour now conferred upon him, backed up as it is by the unanimous vote of this Institute, and confirmed by the King, is but a well-merited distinction added to a brilliant though unostentatious career.

Basil Champneys is the son of William Weldon Champneys, Dean of Lichfield, and was born in 1842. He was educated at Charterhouse, where he was a Foundation Scholar and Gold Medallist—and Trinity College, Cambridge, where he took an honours degree in Classics. He studied architecture under John Prichard, of Llandaff, and began practice in 1867, and has kindly read papers before this Institute on more than one occasion. Some of his works are illustrated on the walls to-night, and it is naturally to his executed works that we turn when thinking of him as an architect, and to his published works when thinking of him as an author. Fortunately for us he has done a good deal of work both at Oxford and Cambridge which is easily accessible.

At Oxford we find: The Indian Institute; the Robinson Tower and new buildings at New

College; Mansfield College (it is not often that a complete college is erected from the designs of one man, and this is consequently perhaps one of Mr. Champneys' best-known works, and it always receives the admiration it so justly deserves); new Quadrangle and Warden's House at Merton College; and new buildings for Oriel College—one of his most recent works.

At Cambridge: The Divinity and Literary Schools and all the buildings of Newnham College.

Other public buildings of a collegiate character may be seen at Bedford, where we find the Harpur Girls' Schools and Grammar School buildings in the square; and at Harrow, where the Butler Museum and new Class-rooms may be seen. Also at Winchester we find the Quingentenary Museum; at King's Lynn, the Grammar School; and in Regent's Park, the Bedford College buildings (now in course of erection).

Again, at Manchester may be seen one of Mr. Champneys' perhaps largest works, viz. the John Rylands Library, and also the reredos, Victoria Porch, library, and vestries at the Cathedral.

Amongst churches erected from his designs are: St. Luke's, Kentish Town; St. Peter le Bailey, Oxford; St. Mary Star of the Sea, Hastings; St. Luke's, West Hampstead; St. Andrew and St. Michael, East Greenwich, &c. And houses: Bannacle Edge, Witley; Crowborough Wood, Matfield, Kent; and St. Bride's Vicarage, Fleet Street, &c., &c.

Of course, this list might be very much amplified, but enough examples have been mentioned to show the varied character of his work and to prove the uniform excellence of all that comes from the hand of Basil Champneys.

[Photo. Bedford Lemère & Co.

JOHN RYLANDS LIBRARY, MANCHESTER
(Basil Champneys, Architect).

As hinted just now, Mr. Champneys, besides being a distinguished architect, is also well known as a writer, possessing genuine literary power—a gift, unfortunately for us, not by any means common amongst architects. Books are produced by architects no doubt, but there are very few of us who can really write, and when we find one who can—as Basil Champneys can—we should like him to feel that we are aware of the fact and much appreciate his powers. Anyone who has read his *A Quiet Corner of England*, which dealt with that delightful district round Rye, Winchelsea and Romney Marsh, written some thirty or forty years ago in a pleasant leisurely way, with an appreciation of English eighteenth-century vernacular rare in those days, will agree that it is an admirable little work. He has also written on William of Wykeham; but no doubt his best-known work, and probably, too, the best thing he has ever done, is his *Life of Coventry Patmore*, which appeared in two stout

volumes in 1900, and is in its way a masterpiece in biography, written with fastidious care and most sympathetic appreciation of his subject. This book alone is enough to make a reputation, and with these great gifts, and being so widely read, and knowing his way about so really well—if the expression can be forgiven—it makes one almost regret—if one is allowed to get so near a regret on an occasion like this—that he has not applied himself more to the critical treatment of architecture in his writings.

Having dealt with the Medal, and also briefly with its recipient in his dual capacity of architect and author, it only remains for us now to hand the Medal to Mr. Champneys, with the earnest hope that he may live for many years to wear it, and that while he wears it he will remember that his Sovereign, in bestowing this well-merited token of his Royal approval on him, did so on the unanimous recommendation of the members of this Institute, who one and all have the greatest admiration for the work and character of Basil Champneys.

John Rylands Library, Manchester
(Basil Champneys, Architect).

MR. CHAMPNEYS' RESPONSE.

I MUST thank the President for the very kind and appreciative words he has spoken of my career and work, and express my sincere gratification at the great and distinguished honour which the Institute has conferred on me. That this recognition should have been paid to me, an outsider, carries with it a satisfaction not altogether dissimilar to that which I have felt in having been employed far more frequently at Oxford than at Cambridge, my own Alma Mater; nor can I fail to recognise the generosity implied in the award. This tribute on the part of the Institute is in fact but a more conspicuous mark of the courtesy and consideration I have always received from that body, and to which I have responded to the best

of my ability. The President and Council have invited me to assist in their endeavours to place architectural education on a sounder footing; to read papers and take part in discussions on questions of art; and some years ago paid me the compliment of asking me to read a paper on a building which I had recently erected. I may say too that however gratifying may be recognition by the general public, which I do not wish to depreciate—it is indeed necessary if it be only to offer opportunities and to "bring grist to the mill"—no artist can fail to attach an altogether predominant value to the judgment of those who are actually versed in the practice of his own art.

An occasion like the present seems to justify a brief retrospect of the phases and tendencies which have been manifest during a period of not much less than half a century which I have spent in the study and practice of architecture, and a still briefer anticipation of the problems which must present themselves in the future. I may claim to figure as an old soldier in the

T. Raffles Davison, delt.

St. Mary Star of the Sea, Hastings (Basil Champneys, Architect).

army of artistic endeavour, "jam rude donatus," presented with the emblem of warfare accomplished;—with indeed this reservation, that I regard the Medal not as a symbol of retirement, but as an encouragement of future effort;—at any rate so far "emeritus" as to have the right of passing in review the battles which have been fought in my day, disclaiming at the same time any such preponderant part in them as was exercised by "Bill Adams" at the battle of Waterloo.

When my architectural studies commenced, Gothic was in its heyday of popularity. I was nurtured in the strictest school of the Pharisees, whose dogma was: "No salvation out of the Thirteenth Century." It is true that even within the limits of this rigid and exclusive school there were divergent tendencies. Ruskin was using the influence of his unrivalled eloquence towards the adoption of Italian examples, while others advocated French characteristics. There seemed a danger that the lessons of our national Gothic might be neglected.

It seemed too as though an exclusive preference were often associated with an imperfect comprehension. The Genius of Gothic architecture must often have wondered at the fruit engrafted on it: "Miratus non sua poma." It is indeed worth remark that the most complete and scholarly studies of mediæval architecture have been produced since the vogue of the style has passed. The measure of exclusiveness was the ruthless fervour which consumed all which failed to conform to a Procrustean standard: the measure of ignorance was the misunderstanding of many important principles and precedents: the result of the two combined was the ruin of many of the most valuable monuments of the very style which was the object of adoration. An antidote to, or at least a palliative of some of these imperfections was the work of Butterfield, which showed a true insight into the essential spirit of Gothic architecture: I can recall the overpowering impression of, as it were, a new revelation, which All Saints', Margaret Street, made on me in my school days: such insight was combined with strong and original creative power; while Bodley, with somewhat similar endowments, was beginning to demonstrate the potentialities of purely English style.

T. Raffles Davison, delt.

St. Mary Star of the Sea, Hastings.

Meanwhile a rather younger school was resuscitating the latest phases of Gothic, showing the capabilities of half-timbered work in domestic, and of the Fifteenth Century, our one specially English style, in ecclesiastical building. The original orthodoxy had been shaken, discredited partly by the abuse of precedents, partly by its inadaptability to modern uses, partly perhaps by a sense in the public of "toujours perdrix"; and the way was open for new tendencies to creep in; the mixed styles of the Low Countries, the English work of the sixteenth, seventeenth, and eighteenth centuries, the French Renaissance—all found their advocates; while these in turn appear, so far at least as secular building is concerned, to be yielding to a more correct and scholarly study of classical examples; so that in my own time fashion seems to have come full circle.

It is useless to lament efforts in the past, apparently fruitless, but which may nevertheless have led to an increased insight into the principles which underlie all phases of art; nor is there need to regret the tendencies of the present. These are not indeed surprising, seeing that, somehow or other, the classical spirit seems less remote from our ideas and civilisation than that of the Middle Ages; and if exclusiveness of appreciation is to be deprecated,

[Photo. Soame, Oxford.

[Photo. Soame, Oxford.

ORIEL COLLEGE, OXFORD (Basil Champneys, Architect).

coherence and concentration of purpose is a condition favourable if not essential to the welfare of art.

There are, however, certain problems already presented to architecture which must severely tax ingenuity and invention in the immediate future. Our art has been defined as that which "makes construction beautiful"; but commercial considerations, entailing economy and speed, are leading to the extensive use of a method by which metal construction is clothed with an external facing practically independent of it. In the absence of any organic relation between structure and external appearance it is hard to see how the principle of this definition can be complied with. Similar influences dictate that the ground floor of commercial, a majority of town buildings, must show an unbroken expanse of glass; but a superstructure apparently carried on an unsubstantial material can scarcely fulfil the primary conditions of architectural integrity.

I have mentioned these problems not with any view of suggesting their solution—indeed I may congratulate myself that I have been quit of them so far, and may leave them to others—but recognising that they have to be reckoned with by a younger generation unless a large proportion of necessary buildings are to be permanently banished from the domain of legitimate art. Let us hope that the talent, which undoubtedly exists, may prove equal to obviating the necessity of such a fatal exclusion.

Once more I would express my thanks to the President and the Institute who have conferred on me this most welcome honour.

Harrow Schools: New Class-Rooms and Museum
(Basil Champneys, Architect).

ART STUDY AT CAMBRIDGE.

By Edward S. Prior, M.A.Cantab., F.S.A. [*F.*], Slade Professor of Fine Art, Cambridge.

Inaugural Lecture delivered in the Senate House, 22nd May 1912.

IN art-study there is a special faculty to be trained for the benefit of the community in a definite direction. The training must be thorough and complete, and yet at the same time the general knowledge necessary to every citizen must not be jeopardised. The University is bound to have a high ideal on both sides: it must provide the consummate specialised education for the particular student, and as imperatively for him the adequate acquaintance with the special businesses of other people, the adequate general knowledge which will enable him to take his place in life and use his speciality to the advantage of all. There are both duties—the talent must not be hid in a napkin but must be used to bring back the best return: and there is the duty to his neighbours that his talent be used to their advantage. We have to move in full consciousness of the delicacy and difficulty of this education problem. My address will be an attempt to gauge how, in my opinion, the capacity of the University to organise art-study can be used in three directions.

First as to general knowledge, which I have called, I trust not arrogantly, man's duty to his neighbour: though not endowed to create art, it is everybody's faculty to use it, and to use it aright by knowing how and why the artist works. It will be allowed that the undergraduate has this faculty for the University to train.

Secondly, when he has the power of art creation —such as with a thousand and a half of students coming up yearly to the University a percentage will have—the undergraduate brings this for University training, to be not nipped in the bud, nor starved off by malnutrition.

But thirdly, the University has a capacity beyond both the general and special training of students. The advancement of knowledge, as knowledge, is a recognised province of University effort. In the fine arts, as in theology, medicine, or science, a continuation school, which will be a school of experimental and creative research, will, I do not doubt, eventually come into existence.

I am aware that in speaking of art and the arts as I have in the abstract, I may be leaving the vague impression that I am proposing an Art-school for the University, a school such as those in which the professional painter and sculptor have been trained, and now also students in decoration and many kinds of handicraft. But let me say at once that the specialised school of professional art is not in my opinion one suited for University adoption. The Art-school, as the professional association of artists, is devoted to the special fashion. Each generation has its taste of art—one might say its discovery of what art is, with a jargon of artistic interpretation that is inclined to be somewhat exclusive of everything but the event of the moment. In the painting of professional art circles events have come thick and fast—*plein air*, impressionism, post impressionism, have been the discoveries of a decade or two—and something in the future is immediately promised us. But what were the finest of the fine-arts a little while ago are now variously estimated. The framed painting and the pedestalled sculpture have been paragons in their day, but they are no longer the only objects of the artist's regard. In the pleasure of form and the perquisite of colour, however and wherever achieved, art claims its criticism of life. Its province indeed is recognised less in the criticism of life than in its environment, and Cambridge might be the Alma Mater of this wide art.

We need not confuse ourselves by the question as to how much intellectual and moral associations can be welded into the senses of form and colour. The definition to hand is that the artist appeals to the emotion by the eye, not to the emotion by the intellect, or by the ear. But as literature and music exhibit themselves on two sides, first as recipient art, second as executive art, so do the arts of form and colour. There is he for whom art is made, and he by whom it is made. There are thus two faculties that the University has the capacity of training—that of the public, and that of the artist. It must consider that its students will be purchasers as well as purveyors—clients as well as architects. Art study has to teach a man to know art when he sees it, and also to teach a man to make art when he can. At Cambridge we have taken on us the office of both teachings.

There has, no doubt, never been a time when the past achievements of artists have not been the subject of intellectual curiosity. The record is so overwhelmingly vast—the stretches of style are so magnificent—the accomplishment and quality of ancient workmanship have been seen to be so extraordinary, that to our later ages Art seems just all this immense past; to most people it hardly seems a present-day matter at all. The University, by its appointments to the Professorships of Archæology and Fine Arts, has proceeded to systematise knowledge of classical art. In 1880 the new ordinances introduced classical architecture, painting, and sculpture as subjects for the second part of the Classical Tripos. My predecessors Sir Sidney Colvin and Sir Charles Waldstein, together

with the Disney Professor, initiated and have vigorously maintained classical archæology on a comprehensive basis, which includes a full study of Greek and Roman art. In 1897 the wider aspect of general art-history came to be recognised, and papers on Archæology and Art now form part of the History Examinations. Studies in ancient art are provided, and I may quote a sentence of Sir Charles Waldstein's: "It is absurd to expect a student of, say, the Renaissance in Italy to have any knowledge of that period in history, while remaining quite ignorant of art, which forms so essential a part of the Renaissance civilisation; and the same remark applies to nearly every period of history."

That Ethnology generally, and its branches such as Oriental Studies or Egyptology, can hardly proceed with a blind eye directed to the arts and architectures of ancient peoples is conceded. The instincts which in primeval man one may summarise as the faculty of mimicking, and secondly the faculty of orderliness, have developed in the decoration of weapon, utensil, habitation, and temple, and in this development present themselves as a record of civilisation. Surely on occasion the convictions of artists have been accountable for the destiny of nations as much as creeds or conquests. And this wide view of art study must also claim a place for it in psychology. The science of æsthetics and their part in preserving the mental balance comes into the sphere of the Moral Science Tripos and is receiving attention.

Though I content myself with this meagre review of the existing art-study it is sufficient to show how wide is its range and how it covers the ground of a general education. It means the history of architecture, the history of sculpture, the history of painting, the history of decoration, the history of furniture, of pottery, of metal-work, of weaving, of all the thousand activities of human craftsmanship. Every occupation is ministered to by art and has therein a history of fact, a record of past achievement. But secondly, the bare facts are not the only history. By the side of them is a history of art-criticism, which makes a whole department of art study. Was there in any case a good or bad art? When was it good or bad?—and why? The array of art-facts cannot indeed be surveyed without the action of critical appreciation, without the stimulus of the æsthetic standpoint, and the training of taste thereby. I would wish to point out that taste as an asset of art-education is an essential part of general knowledge. Archæology and art must be coupled together for this reason. The subject is not complete, or rather is not properly comprised as the knowledge of facts. Study of ancient architectures and decoration needs vitalising by an imaginative understanding of their artistic value —an appreciation of how the quality of art came and went, an appreciation that must be made from the standpoint of our own art conditions. Art-knowledge in this sense is a wide social stimulus for our life to-day. It is for the benefit of society that the great ideas written in the arts of the past should not lapse because we have lost the clue to their reading. The remains of ancient civilisation, its vestiges of art and architecture, are eloquent of human aspirations. Its voice has a clearness often denied to our knowledge of ancient religion and literature. This is my first point, that the right use of archæological knowledge in the education of the general student is to give him a right understanding of artistic value.

My second point is to engage your sympathies for what the University has undertaken in its School of Architectural Studies. In the teaching of a school, archæology and architecture may be linked together, but with the saving meaning that the one is not bare history, and the other not bare building; so taken they cover the whole field of art. Certainly the training given by the first principles of architecture may be the training of the artist in all his functions. As I have said, among the four thousand students who are on the books, the University is bound to get certain natures in whom there develops a passion for making, ordering, and shaping—a passion as natural to man as that of reproduction. Why in these cases should the potential artist be wasted because he has come up for a University education? And more, the University will now necessarily attract to its curriculum the best kind of artist student, one that is prepared to face the world as a citizen with a practical public career. He is entitled to claim from the University the full education of his time, the full draught of knowledge that a University can give, its spacious outlook, and its temper of communal associations. But this being so, the training offered has to be to the purpose, not merely a book knowledge—the A B C of facts—but in the craft of the artist's trade.

"Preliminary Architectural Studies" are to be taken as a course to prepare the student for special professional training when he leaves the University. These studies come partly as an adjunct to the general education, but more systematically in succession to the general curriculum of certain subjects. For example, an undergraduate with the intention of taking up an art training in succession to his general education would study for Part I. of the Classical or Historical Tripos, or for that of Mechanical Science, and then proceed specially in the Architectural School. The Board of Architectural Studies is now constituted for the special purpose of arranging architectural teaching. And at this point it would be useful to glance at what "Preliminary Architectural Studies," in the first place, pre-suppose as to general education in their students; and secondly what they propose in themselves to teach.

The presupposed general education would no doubt be that tested at least by the General Examination for the Degree. But the student before establishing his claim as specialist for architecture should show that he has interest in the practical forms of art, and has the instinct of handicraft. The power of the artist is a distinct physical idiosyncrasy, a predisposition necessary for training which it is cruelty to force on the unfit. He should show, secondly, that he has the capacity for understanding the elements of a practising art. Architectural training is no good as a refuge for the mentally incompetent. For example, the architectural student needs sufficient scholarship to understand and write a letter. He must have sufficient mathematics to do a sum and understand a formula ; sufficient science to take in the meaning of analysis and the action of common forces ; and sufficient knowledge of physical facts to comprehend the structures of common materials. But moreover, and chiefly, the art student must exhibit his craving for creation, he must have the desire to plan, make, and shape, and show the desire by eagerness to observe plans and constructions, to notice the details of architecture, painting, and sculpture, and take pleasure in the examples of the arts.

This is the groundwork of interest and capacity on which " Preliminary Architectural Study " builds. The courses are at first prepared for the widest ends ; the specialisation of the professional comes afterwards. The end to be served is that the community get real artists rather than professional specialists for all the purposes of public utility ; artists educated and competent for the laying-out of cities and the ordering of countrysides, their boundaries, their roads, the bridges, the railways, the wharves, the parks, the public gardens ; as well as all the public buildings, the markets, the churches, the halls, the theatres ; and not only for the construction and shaping of such laying-out and building, but the decoration of it all—the ornaments and the colours that make it seemly ; the pictures, the sculptures, for public and for private use, the fabrics, the utensils, the dresses: the books, all these have shapes and colours—all are developments of mimicry and orderliness, all are to be the works of artists if the community is to get what it ought from art. As in the Ecole des Beaux-Arts the architectural student should at once come into association with all the arts. This is his first distinction, that he finds himself a working artist. While, by archæology and the literary criticism of art, the arts are learned as a lesson by rote or as a romance of adventure, it is for actual service that the artist enlists, that his hand is trained and his eye exercised.

When this is understood by the student, historic archæology becomes a new thing. The achievements of the past are observed not as a story but as an exercise. It is not what was art in ancient times, but the way of it now. Forms and handlings come before him in their evolution, and he tests their achievement by his own experience. From this fresh point of view architecture exhibits itself as not so much form, as creation in marble, in stone, and wood—not a scene-shifting of fancy, but construction for a purpose. Similarly the art of painting reveals itself, not as a fanciful story-telling, but as the putting on of paint on surfaces for a purpose : sculpture is seen as stone-cutting, modelling, and founding, not as mimicry, but in the forms conditioned by the purpose of the expressive idea : and as in the arts of furniture and decoration, all are conditioned by the facts of their making, and chiefly and strictly by a manual dexterity, a dexterity to be learnt and habitually practised.

But all this has to be brought within the capabilities of University teaching ! I admit the difficulty. The programme of an archæological and architectural school must be rigidly sifted, and narrowly condensed, if its bulk is not to overweight the one or two years of a course in architecture. I know that on this ground very serious objection has been taken to the effort of the University to compass an architectural education in its undergraduate course. But I believe our programme can be regulated if we only take the " Preliminary Architectural Training " to mean the commencement of an education on broad simple lines in view of a practical art. Nothing can be done by shirking the working theory of art in order to magnify a literary or mechanical view of it. Neither classical scholarship nor mathematical acumen means of itself anything in the science of building. But the desire to make and to learn what *making* is—that is the gist of it.

The systematising of the preliminary course might, I think, proceed on lines much as follows. First, as to the historical styles : the teaching of these should be directed to the great creative periods. The actions of building, however complex in their results, have been in themselves few : in a broad sense the wall and the roof comprise them. The historical styles can be used to enrich the imagination of the student and ground his technical appreciation of art on study of the great creative experiments in style, the wall of the Egyptians, the column of the Greeks, the arch of the Romans, the dome of the Byzantines, the vault of the Romanesque, the spire of the Gothic, the ceiling of the Renaissance. So historical construction can be studied in the main constructive necessities of building, the windows, doorways, floors, staircases, roofs.

The value to education becomes great if simultaneously with the historical progress of building arts the student gets some practical exemplification of modern methods. As he reads how the ancients built their walls, he should by immediate reference see how moderns do, and why. In Cambridge

actual examples side by side of historic and modern building exist as completely as anywhere in England. Coincidentally with this should come a reasonable knowledge of the working materials which construction uses—also by direct object lesson. So grounded he will realise how the artist in all his works gains the power over his materials by the discipline of the hand and the eye—how for each material there is a special handicraft, and for each construction a special selection of material and a special method of expression. Here acquaintance with the methods of the chief arts should be offered the student. He should have demonstration how the sculptor models, how the glass painter manages his craft, how the painter or draughtsman sets about his business, and how master craftsmen and how the architect proceed. In this way the meaning of the great arts of the past comes home to him. The historical lesson becomes a motive to him, the great lesson that it is not by mimicry but by personal expression that the value of creation is consummated—that ancient beauty cannot be made by him, but that he must make his own for himself. I wish it to be insisted that the only just education of the artist at the start and all through is making him competent to meet present-day conditions with the present-day materials of art. He must be equipped from the beginning to take those conditions seriously, and to experiment in them. Like other artists he is to learn the drawing—the practical draughtsmanship that is necessary for the architectural career.* And hand and eye must be trained early to their business while hand and eye are supple and plastic to training. The years from nineteen to twenty-one are all-important for educating and adapting the physical tissues. The ease of the fingers and delicacy of muscular control which are necessary for draughtsmanship are seldom mastered unless acquired before twenty-five. Therefore the student of art must start with his handicraft: he must draw and understand what a line means: he must model and understand how form is constituted: he must colour and know what tone and shade express. The discipline has to begin at once, as the essential start. The training of the hand to mimic, and the training of the eye to order —these are the first and last lessons of the artist's career.

To sum up: Our school of architectural studies proposes the broadest elementary teaching. To this end it must sincerely specialise in the direction of a working theory. It should teach artistic skill from the very outset by setting the student to draw and model and see others drawing and modelling. It should keep to the chief materials of constructive art, such as are of practical use to-day and such as the student can see in use in Cambridge. It should teach historical art—not at large, but with strict reference to the creative periods, and with strict reference to the structural invention out of which the artistic creations grew.

I ventured to foresee a third function of the University, one that to my mind follows necessarily on what the University in establishing art study has undertaken. The granting of a certificate for a one or two years' course in architectural studies is confessedly but a step, and a short step, in the education of the artist. The nation does not look on us as merely drill-sergeants for the recruits of knowledge; it expects us to carry on the campaign and to enrich social life with the results of investigation and experiment. By setting up a preliminary school of architecture, we are looking forward to our alumni taking up their own education in our midst, and carrying it forward by the path of research.

The need of an established school of experiment in the arts is, I venture to say, a pressing one. But I would not give the impression that the need extends in the direction of academies. Academical definition and regulation of art may be of service at certain phases; but not to us now, as it seems to me, for the reason that during the last century it has been the failure of adventure in practical experiment—the conviction that what has been shall be—which has resulted in stagnation. The ritual observance of traditional excellence digs a grave for academical art. I admit that in certain directions we have had our sectaries who have quarrelled with the orthodox. Yet the deity of past perfection has never in the last four centuries lost his votaries. If there have been schisms and secessions, each heresy has left the hierarchy of ancient style established and endowed.

I may seem in this to have spoken rather of architecture and decorative taste. It is certainly here that research and experiment carried on systematically by trained artists might work to new ends. There is needed that systematic examination of first principles,* a review of the grounds of belief in the light of new conditions, which takes place constantly in science and religion. Let us take the problem of style, and the practically universal habit of all decoration nowadays to be designed according to the canon of some ancient architecture—whether Classic, Gothic, Greek, or Japanese. We drift this way and that, but no great current sweeps us into new boundaries. Yet great movements of the arts have in the past followed on the adoption of borrowed standards, and the stimulus of ancient arts! The whole phenomenon is worth investigation. How strange has been the rhythmic flow and ebb of the great stylistic movements! The centuries of dead effort that separate them, when awkwardness and inefficiency seem constant, as if art were perishing

* Mr. Reginald Blomfield, A.R.A., in his second lecture to the Royal Academy Students, 1911, gave a reasoned and final judgment on the question of draughtsmanship and its bearing on architecture.

* See W. R. Lethaby, *Architecture*, pp. 8, 9.

from the earth : then the curious sudden uplift of a new creative style, when capacity in art expression passes from barbarous inefficiency to complete mastery almost in a generation. And then the curiously recurring symptoms that supervene when the wonderful technical developments of the moment of creation seem to smother the spiritual force that uplifted it and are themselves captured and exploited to commercial ends of one kind and another. How there come the academising and standardising of art, competitions of correctness and extravagance so that fads and stereotype make up often simultaneously the body of art. And then how there follow pathetic attempts to revive old models—revivals whose weak enthusiasms and limited expression appeal only to sections, while there grows up all around a general indifference to art, or a distaste for it, and we are back again in the stagnating centuries waiting for that change of conditions which may bring a new Buddha. This is a rough and ready way of blocking out the life-history of the great styles. Still something like it one sees not only in the big but in the little movements of art, and its stages might be paralleled indeed in the career of many a single artist's life. Are there not here a set of phenomena waiting for investigation and research for a practical end ?

A change in the conditions of life which will introduce a new era : is not this the position of art in the world now, and may not what we are waiting for be immediately upon us ? The social theories of life are certainly in flux—governments and interests have dragged their ancient anchors—every industry and every profession has new conditions. Can art, can architecture, painting, and sculpture be what they have been ? The day of the cultured patron, to whom architecture gave a palace, and painting and sculpture a regal furniture, is surely over. The easel-picture and the classic sculpture have lost the competent purchaser, while picture shows and art auctions are now the advertisement not of art, but incompetency. But all the same, connoisseurship in the arts has widened ; illustration of life is the popular art. The private possession is growing stale, running into strange fads and queer expressions. But an external art—public to all—architecture, painting, and sculpture, treated as an art of environment and of decorative enjoyment—is shaping itself as the art of the immediate future. At least I think so. And is there not room for an investigation and research as to what should be the medium and material of all this public external art ? The school of the art must experiment to the condition of smoky and dusty air under dripping skies, and in competition with the selfishness of an overcrowded existence.

In architecture a new medium and a new material have appeared—the application of cement fortified by iron to structure is, in my opinion, going to be a revolution. At all events it is now replacing the building of stone and wood and brick that the last four hundred years had standardised. An entirely new range of expression may be opened up. At present this practice of cement concrete runs in the rut of the old stone effects that the conditions of Gothic and Renaissance building created. As in the outset of any new material of art, at first its practice goes timidly in leading-strings. At first it mimics ancient performance and borrows seemliness. But when it learns to make its own seemliness, to create its own order, then in the growth of experiment and in the adventure of use an architecture may arise that shall again be the mother of the arts. A school of University architecture taking the lead in this evolution would be of service to art.

Am I making art-study too big a thing for the capacity of the University to undertake ? There are practical directions in which a continuation school of architecture with trained workers might help education in certain special directions where help is needed. Cambridge is already a home of archæological learning, and from Cambridge the pioneers of research in all the problems of ancient culture are distributed to the world. An archæological school is equipped with museum and lecture hall—it only waits students to grow into the foremost—perhaps the one definite —school of archæology in England. It waits too, perhaps, for the organisation of a present-day school in architecture, in craft, and in style to equip it thoroughly for the discovery of the past. We want continuation studies in art and architecture, such as will equip students with the habits of observation and comparison on which archæological discovery rest.

There is another special class, for whose needs a school of archæology and architecture ought long ago to have been instituted. The Cambridge curriculum of theology sends out to nearly half the parishes of England incumbents and curates. Many come immediately into touch with some of the finest architecture and some of the most valuable records of art that our island holds. Our ancient cathedrals and parish churches very often come under the care of Cambridge graduates, who obtain what is practically the power of ownership to do what they will with the ancient religious art. The records of the English nation are in their trusteeship to preserve or destroy. A knowledge of what is in their hands would seem a part of their education. The tragedy has been that the knowledge has scarcely been given, only by chance, by individual effort, or most often not at all. It is a tragedy that with the best intentions, and often with pathetic exertions to understand, the clerical guardians of priceless treasures have been so ignorant, despite a University education, so unstudied in the ideas of religious art, that they have wiped out in the last century a very large part—I believe I should say the greater part—of the religious antiquities that a hundred years

ago our churches everywhere possessed. While there are still art treasures to keep, would it not be to the advantage of the clerical vocation if clerical students took a course of Historical English Architecture? They should learn too of the onslaughts and effacements to which church architecture is exposed in the hubbub of present-day conditions. A School of Church Preservation might fitly have its home at Cambridge.

But this is a matter on which I would go farther, on the ground that art to-day must come into public life, and that it has its opportunity in a special sense in churches. In most ages the religious art has been the popular art, and the artist has found his best client in the Churchman. But this alliance has slipped its bond. I could count on my fingers the occasions when acknowledged great artists of the English school have in the last hundred years been allowed to show their art in our cathedrals and churches. For the most part the edifices of public worship take nothing from any genuine artist—from anyone who is the personal worker, the man of ideal handicraft, trained by experience, and acknowledged by repute. They deliberately accept the tradesman, the commercial salesman of decorations, and the conscious purveyor of money's worth. Yet in its singleness of purpose, its self-denial, its truth to its principles, the genius of the artist pushes close to that of the religious. How then has it become the fashion of religious furnishing to accept the double-minded, the insincere, the make-believe religious output of the commercial church-fitter? Surely there has been a want of education that the University might have given. Would it not be an advantage for every candidate for orders to be given the opportunity of associating with and understanding the artist? Cambridge, in instituting a continuation school of archæology and architecture, by its education and influence could do much towards a genuine religious art directed to public ends.

ARCHITECTS FROM GEORGE IV. TO GEORGE V.

By Maurice B. Adams [*F.*].

Read before the Glasgow Institute of Architects, 14th February 1912.

BIOGRAPHY aims at satisfying the commemorative instinct by the exercise of its power to transmit personality. The quality which invests a work of art with its primary interest is individuality. The Painter, Sculptor, and Architect as creative artists, like the man of letters, possess a superiority over statesmen and soldiers as biographical subjects because the former display a certain gift of self-expression, and in a literary sense become more articulate than the man of action and talkers. Biography is on all fours practically with other literary products of creative imagination, only with this difference, that the biographer must confine his enterprise within the four corners of the actual.

A century of facts, however, even when concentrated into the abstract, might readily enough transform any digest of actualities into an indigestible mosaic or concrete. So some things must be taken for granted, and I can scarcely be expected to name every milestone on the road from London to Glasgow. To insure a comparative and sufficient envisagement of the epoch from George IV. to George V. from an architectural aspect, I found it necessary to compile a schedule of facts, names, and dates arranged in something like sequence, furnishing a sort of gallery catalogue of British architects of the nineteenth century down to the present time. In printing this list it has been thought better to omit the names of living architects. Although reduced in this way, the schedule as it stands is more complete than any hitherto published, and, by attaching it to my Paper many repetitions and references may be avoided, thus sparing irritating items which otherwise must intrude themselves in the progress of this essay. My aim does not extend to any sort of "Biographical Treasury." Thus we must tread warily, being upon delicate ground, and I leave living men's work to tell its own tale. The euphemism of Goldwin Smith may be called to mind:

> So, ladling flattery from their several Tubs,
> Stubbs butters Freeman, Freeman butters Stubbs.
> Nor, scarcely sheltered by a paper Screen,
> Should blustering Freeman butter blundering Green.

Coteries and literary clubs among architects have existed and still flourish, but as a rule architects, like other artists, do not go in for mutual admiration societies. Posterity alone can determine men's relative merits. The need of reserve as to contemporary productions is liable, however, to the danger of dropping into the dryasdust stage, and to make things virile and expressive the human side must not be forgotten. Every building, good or bad, possessed an author whose life, it may be, was crowned by its creation. On the other hand, is there no thought left for the sterile ambitions and disappointed hopes of the long array of unsuccessful competitors and of their unrecorded

unremunerative efforts—the baffled aspirations of those who deserved success but somehow got put out of their stride while tramping on to the inevitable oblivion of the uncounted? Art may be long, but its record is made up of small chapters depending upon the opportunities afforded and the encouragement given by each particular period, its most brilliant pages being illuminated by individual masterpieces. Those who accomplish nothing are forgotten, but what of the multitude of unrecorded craftsmen who helped to enrich the most famous buildings of the world; and what, too, of the designers who conceived and carried these erections out in succeeding generations?—triumphs in architecture known in history centuries before the architects of the days of George IV. to George V. were born or thought of!

Speaking as we do now, looking into the vista of retrospective, we can but reflect that sufficient for these master men was their work. All our inevitable impedimenta in these complex times with our examinations and diplomas serve as our sole and inconsequential substitutes for lost tradition. At best the culture and elegancies acquired by scholarship and the language of architecture lacking impellent intuition of personal power in design, must remain uninspired, cold, and academic. An acquaintance with fine design, as determined by reference to standards established by the *chefs-d'œuvre* of the past, may supply a corrective to the disorderly eclecticism actuating contemporary practice of our mistress art. "The scholar architects" in the exigencies of competition are now, in spite of stricter examination methods, assuredly disappearing, and we are told that their exodus will be detrimental to architecture. One thoroughly able and well-proportioned exemplar in building art, however, advances architecture far more than Professors' exhortations or a multitude of academic commonplaces produced by the fashionable practitioner loaded with transitory honours and too busy for words. No man's work will live if he overproduces. The virile work of Pearson exhibits this natural law, and he told me he would rather build one church well than attempt half a dozen indifferently. Now that an architect's calling becomes more and more involved, its scope is beyond the grasp of any one person, so specialisation remains the only alternative. The leisurely way in which work was done when I was a pupil as contrasted with the hurry scurry nowadays is sufficiently remarkable. Who ever thinks of inking-in and colouring details in current practice? Provided they are well thought out, perhaps that matters little—but are they so?

In thus making an end of this too ample preamble, the tale told in the biography of the late Duke of Devonshire occurs to one. As Lord Hartington, the Duke was presenting a statement in the House of Commons when Secretary of State for India. After labouring with his subject he yawned, and with great gravity unexpectedly said, "I fear all this is damned dull!" I would spare you a like infliction, but if any intelligible epitome of our inquiry is to result, the threads of a somewhat threadbare story must be gathered up. This at the outset is less easy owing to the "Period of Parenthesis" due to the decadence of the Classic School having been concurrent with the incipient efforts of the "Gothic Revival," the one expiring in the cold wane of yesterday's moon, while the other's advent anticipated the next day's possible sun. Taste owned no standard, the results were unequal and divergent, much less than exhilarating, for the change marked a break and not a transition. Architects tried their hands at both styles,* and set to work wrongly by adhering to Pagan plans while covering their exteriors with lifeless details copied from mediæval precedents. Some might prefer to skip a few pages of the darkest hour in this chapter of architectural history, but the past is too valuable to be ignored, and to succeed ourselves the lessons of inevitable failures have to be learned. The rubbish of to-day may be thought better of to-morrow. Nothing worth doing will be accomplished by becoming faddists, purblind to all merit except in remote ages, content to be counted as apostles of reminiscences. The latest new cult, having got tired of "Late Renaissance," gush over the "monumental manner" of Farmer George's days, fettered as they were by the shackles of social mediocrity. Architecture is nobler than an inoffensive sort of good square building of old Tory days, and even in these democratic times the capacity for architectural beauty must excel the eminence of structural science. The greatest art of the world has always been practical, as the outcome of the wants of its time, and never retarded by a fear of inharmonious accord with previous ages. Science may pride itself on its accomplishments, but it has a weakness for degenerate taste, and utilitarians are apt to care little for art. Moreover the tardy growth of artistic development in this country is more or less connected with racial causes and conditions under which the English were compelled to work out their own destiny. The torrent of literary activity which burst forth in the reign of Queen Anne had little in common with the native talent for art, which then remained comparatively dormant and distinctly uninspiring. Our artistic shortcomings may even still suffer from our insular independence, but there is a gain associated with Anglo-Saxon prejudice and individuality. The importations of early French and Italian Gothic were only of short duration, and some are saying that the French Renaissance is exercising

* James Essex, F.S.A. (1722–1784), was the earliest architect in modern times who devoted himself solely to Gothic work. He was also a builder. He did the west front of Emmanuel College, Cambridge, 1772, restored Ely Cathedral 1757–62, and the central spire of Lincoln Cathedral 1775. Published architectural pamphlets.

a steady influence now; but the movement is exotic, and the effeminacy of Latin Parisian taste is little likely to supplant British muscularity. The marked tendency towards French art which arose about the middle of the eighteenth century accomplished little interchange of fashion between the two countries, though Scottish architecture was impressed much more, as happened previously in the earlier Renaissance and Flamboyant Gothic. After the European Revolution in 1848, when France threw off the embarrassment of tradition, and entered upon a strangely different national career, English architecture was not affected, notwithstanding the brilliant building enterprises of Louis Napoleon. Crooked streets in old Paris were annihilated, making space for noble boulevards as straight as an arrow, no longer refuges for revolution breeders, avenues for the swift corrective cannon-shot, with roadways of asphalt; no more paving-stone barricades for sanguinary mobs. War in the city itself inspired the scope of architectural progress.

The manners and morals of the age from whence we are starting had degenerated, and times were not particularly brilliant in 1820 when the "First Gentleman in Europe" ascended the throne: so in order to take our bearings it is requisite to glance back even so far as Stuart days to adjust properly the antecedents of Early Victorian Art. Evolution in design had spent itself by the time of George III. No tradition worth mentioning remained, and our most accomplished achievements henceforward were due to individual example. Academicalism had reigned long enough. "The Neo-Classic period," which extended from 1666 to 1820, has been divided thus: the Formative Period, from 1666 to 1720; the Palladian period, from 1720 to 1760; and the Formal school, which ended in 1820. War and fire have generally contributed to the advance of architecture, and since the era of the Middle Ages the one outstanding event which had the most immediate influence upon subsequent building art in this country was the Great Fire of London in 1666. Wren thus was given his opportunity, and although the governing authorities then failed to realise theirs in not adopting Sir Christopher's plan for the lay-out of the metropolis, the great thing that did matter was his rebuilding of St. Paul's, and the building of his many churches in the City, and Greenwich Hospital. The second conflagration to be mentioned as of architectural import was the burning of the old Houses of Parliament in 1834. These two events coupled in this way define the beginning and the end of the "Neo-Classicism" of English building. Till the turn of the tide of fashion towards the closing years of the last century indigenous architecture became associated more or less with the "Gothic revival." So little attention indeed was devoted fifty years ago to Classic work that it would have required an inspired prophet to have foretold the change which our children have witnessed, and no one could have thought it probable that the praise of Soane and his school would find expression in the early days of the twentieth century. Belcher and Macartney's book on the "Later Renaissance" helped to bring about this swing of the pendulum. Long prior to the Georges, beauty, colour, and grace had succumbed to the Puritans, the Revolution, and the iron hand of Cromwell. Dress had become sober, the cut of its lines was formal, faces wore a hard expression, and as materialism gained the ascendency enthusiasm had become associated with what was thought "bad form," and art was glacial. Houses were grey, with flat roofs and hopelessly dull interiors, although some of the better sort exhibited a somewhat architecturally contrived plan, recognising vistas by making one room lead out of the other. A reaction so early as the dawn of the nineteenth century evinced signs of activity, but so little was mediæval art comprehended that it was generally spoken of as "the English style," ignoring the historic art of Europe. Wyatt was building Fonthill Abbey, known as "Beckford's Folly," on an enormous scale with puerile and petty detail, but an advance was registered when John Shaw erected the clever church of St. Dunstan-in-the-West in Fleet Street, and added a respectable deception to Christ's Hospital in so-called "Gothic." The new courts of St. John's College, Cambridge, described as "a monstrous pile of ugliness," were put up by Thomas Rickman, the Quaker, to whom we owe the invention of the nomenclature of the English Periods of Architecture in his *Attempt to Discriminate*, published, with "The Classic Orders" as a preface, in 1819. Porden had built Eaton Hall, and Atkinson, a pupil of Wyatt, carried out "Abbotsford" for Sir Walter Scott. Augustus Pugin and Le Keux informed the educated public by their illustrations of Normandy and other mediæval work, thus paving the way for the turbulent crusade against Pagan inconsequence so vigorously undertaken by Welby Pugin, whose graphic *Contrasts* and *True Principles* did so much service later on. His energy was attributed to what "Classicists" called his "Whimmery," while his critics applied to him the sobriquet of "Smellfungus," and so "the Battle of the Styles" began. Anterior to that event there lived, quite apart from this battlefield, a delicate and physically fragile individual of retiring temperament, devoid of technical training, who single-handed wrought a revolution by discovering and popularising the charms of the picturesque in such common things as old cottages, and so opened up the possibilities of simply befitting countryside domestic architecture by which English architects made a world-wide reputation long years after Samuel Prout, the man I mean, had been forgotten and reckoned as a bygone. What man of his century dreamed of the exquisite beauty existing in the unsophisticated, tumble-

down, neglected smaller Tudor and Stuart-built dwellings of the husbandman before Prout made his brown-ink and reed-pen " dotted and blotted sketches " ? Piranesi no doubt, and Rembrandt too, with such studies as his " Mill," had extended influences, like Cotman and others, towards a truer appreciation of the higher forms of architectural picturesqueness, and Piranesi's Baroque compositions told in an imaginative direction. *The Beauties of England*, edited by Britton and illustrated by Prout, fulfilled a mission in the way I have indicated, at a time when our forefathers displayed an intense ignorance of architecture. I could support this by many quotations from contemporary writers. One will suffice, and it had reference to York Minster. This exponent of art writes: " It is now agreed to be in the Saracen style, and the architects who adopted this style don't seem to have considered the impropriety of their adoption . . . The external appearance of the old cathedral cannot but be displeasing to the eye of every man who has any idea of propriety and proportion." It is difficult to understand such benighted hyperbolical nonsense. Piranesi had a hand in illustrating the famous book by Adam on *The Palace at Spalatro*, issued ten years anterior to the birth of Prout, when Bartolozzi did the engraving, but this work was beyond the range of ordinary people. At this time in France the reign of sound and considered Classic inaugurated by François Mansart, who flourished at the same period as Inigo Jones, had well-nigh run its course, and things were shaping architecturally towards the chilly, pompous style of the Empire, which in a way was based on Palladian lines. Wood of Bath and Le Roy of Paris exemplified the spirit of refinement in design which found expression in France in the buildings designed by Gabriel, also in London and Edinburgh by Robert Adam, the most tasteful architect of his day, though his manner for various reasons failed to find many imitators. The Adelphi Adams were extensively engaged at the time by the nobility, and by speculating, too, on their own account. Thus they enjoyed opportunities denied to Stuart and Revett, while Joseph Bonomi only had a restricted practice in which his skill was always manifest. Thomas Leverton did more, and was associated with the lay-out of London squares. Sir John Soane, the master of commonplace Greek, and Professor at the Academy, who designed a scheme for the House of Lords, was much in favour, erected the Bank of England, and left a most excellent museum. James Gandon, pupil of Sir Wm. Chambers, displayed a much higher capacity when he won the competition and built the Custom House and Four Courts at Dublin. The Composite colonnade added to the House of Lords occasioned some chaff, and someone said: " What Order do you call that, Gandon ? " " Well," was the reply, " it's just the order of the House of Lords." The expiring embers of the eighteenth century had not been extinguished without a sudden flash of the Baroque, the Rococo keeping concert with the vagaries of the Ornamentalists, who fancied architecture consisted of so much applied enrichment more or less. They published pattern books, and, seeking inspiration from Peking, also introduced red lacquer work for furniture and decorations. For portable pieces some of this work is very charming, and certainly the Chinese wall-papers imported at this time were most beautiful, brilliant, and durable. The Chinese room at Blickling Hall is an example in point.

The culminating extravagances of George IV. were encouraged by John Nash when building the Regent's plaster-fabricated Palace known as the Royal Pavilion, Brighton. This vogue for extraordinary diversions was thus exploited, but it was not all vulgar, and many of the appointments in glass, both in form and colour, were most clever; also the grotesque gilded carvings in this seaside palace were in their way excellent. Having had charge of the works when the premises were altered for the use of the town, I knew the building thoroughly, and added the public library and art galleries out of part of the old shell. At the period of which we have been speaking, houses of quality had Watteau panels and decorations framed with a fantasy of scrolls and ribbons, mingled with toyish birds and ambling monkeys, much esteemed as the personification of good manners and elegance.

A brief quotation from a contemporary magazine furnishes a good idea of the Court environments and current taste when the glories of the alterations at Carlton House Terrace were carried out for the celebration of the twenty-first birthday of George IV. " But the saloon may be styled the *chef-d'œuvre*, and in every ornament discovers great invention. It is hung with figured lemon satin . . . the ceiling is ornamented with emblematical paintings representing the Graces and Muses . . . It is impossible by expression to do justice to the extraordinary workmanship as well as design of the ornaments. They each consist of a palm branching out for the reception of lights. A beautiful figure of a rural nymph is represented entwining the stem of the tree with wreaths of flowers."

The vacuity of this extravagance need not detain us, beyond saying that the palm-tree columns were also made a great feature in the drawing-rooms at the Royal Pavilion, Brighton. It strikes one, in reading about the blatant etiquette and expensive social comedy of Court life in Europe then, how incongruous were the common conveniences of their everyday doings, and how totally disregarded were the most elementary requirements of sanitation. Light and air seemed equally unthought-of in the fusty upholstered, unventilated, pretentious dwellings of society, with their *bric-à-brac* better suited to the inventory of a stage wardrobe, though they exhibit the taste of

their day. No doubt some of the more stately dwellings, such as the Bishop of London's mansion in St. James's Square, are marked by architectural refinement of plan; and S. P. Cockerell, its architect, was a most cultured man. A few West End residences of this decade show the same distinction, but there was a prosaic order and colourless proportion about these decorous façades. James Wyatt, who acquired a big fortune, flattered by Walpole for his Gothic work, following up the Græco-Italian style, designed the "Pantheon" in Oxford Street; and Wyatville, R.A., invested midst Edwardian surroundings the incongruities of the Empire style at Windsor. His diploma drawing at Burlington House, showing a bird's-eye outlined view in bistre of a mansion for the Earl of Yarborough, dated 1826, is no mean performance. W. Wilkins, R.A., built the National Gallery in 1832, and the British Museum, by Sir Robert Smirke, was commenced in 1823. John Dobson, of Newcastle-on-Tyne, erected the famous station there and laid out the town for Thomas Grainger. Dobson, by the way, was the first architect allowed to exhibit a coloured drawing at the Royal Academy; up to 1815 architects had to be content with black-and-white drawings. Whatever niche may be accorded to Sir John Soane in architectural history, he will not be best remembered by the box-like galleried tabernacles which he put up. St. Peter's, Walworth, filled him with such pride that he reproduced it later at Holy Trinity, Marylebone. The church was one of his best, and Walworth in 1824, when it was built, ranked as a fashionable suburb for the residences of merchants. Having had to alter the interior and re-seat it, I may mention an amusing incident. It so happened when Soane put up the organ in the west gallery that the ceiling proved too low to allow of the bigger pipes being erected, consequently a sufficiently big hole was cut in the plaster to give the pipes head room, and for over seventy years their volume of sound expended itself in the roof midst the owls and the bats, and no one below was a penny the wiser! I only ascertained the fact when the organ was removed to the choir end of the church.

St. Pancras parish church, by the Inwoods in 1822, famous for its Greek style of course, leaves Soane miles behind; but then St. Pancras church cost £100,000, and Marylebone church cost nearly as much. University College, Gower Street, by W. Wilkins, dates from 1827. Two years later the Travellers' Club displayed a remarkable departure by Sir Charles Barry, who had then returned from Italy fully impressed with the Farnese Palace; and Wolfe, a pupil of Gwilt, had systematised his method of study, inducing him to forego his fancy for Egyptian hieroglyphics covering mural surfaces with enrichments. Thus inspired from Italy, Barry also designed the Reform Club in 1837, and Bridgwater House in 1847. Barry's early taste for redundant ornament reasserted itself in his Gothic work, which will be mentioned later. Alluding to ecclesiastical buildings, he said: "I found the Evangelical clergymen very fluent preachers, with great ideas of erecting churches for nothing!" Liverpool was ennobled by the building of St. George's Hall: its architect, H. L. Elmes, a pupil of his father, died early. By Elmes's last wish Professor Cockerell finished the building. Cockerell, foremost as a brilliant "scholar architect," and exponent of the higher school of theoretical Classic, erected the Taylorian Building at Oxford. George Basevi carried out the structural shell of the noble Fitzwilliam Museum at Cambridge and laid out Belgrave Square. Hyde Park screen witnesses to the refinement of Decimus Burton, the architect of the Athenæum and United Service Clubs, Pall Mall. Sir William Tite commenced the Royal Exchange in 1844, which, it is said, owned a natural parent not recorded in the register. The west side of Somerset House was added a little earlier by Sir James Pennethorne. A considerable influence on façade treatment about this time was due to stucco, one of the most useful and ancient of materials; but cements are modern, and to what base uses have they not been put? It may be useful to give a date or two. Coade's patent stone dressings were used in 1771 by Leverton in Bedford Square. Robert Adam employed Liardet's cement for external ornamental work both in Fitzroy Square and the Adelphi. Parker patented Roman cement in 1796. Portland cement, invented by a bricklayer named Aspdin, was patented in 1824, and Keen's cement was patented in 1838. Nash is accorded the credit of having introduced the "Stucco Style" by his building of Regent Street and the Quadrant. Patent selenitic cement was invented by General Scott in 1870. There is also another practical matter which cannot well be omitted, and it may be mentioned here. However, at the moment I should like to point a moral as to *esprit de corps* by saying that Wyatville, a much-maligned man, merits our respect as an exemplar, because when the tipsy Regent wanted to get rid of Nash as architect of Buckingham Palace by putting Wyatville in his place, the good man declined to supplant a brother architect even at a Royal "command." I have known architects who might still learn a lesson from the disparaged Wyatville.

The further subject just alluded to is concerned with architects' professional charges. Now that Governmental departments have developed so enormously, and Local Government Councils more than ever engage salaried architects, the nation paying, all told, much more than would be incurred by employing outside practising architects at their modest 5 per cent., a reference to former practice in this respect will not be extraneous to this paper.

As Government architects, John Nash, Sir John Soane, and Sir Robert Smirke had a retaining salary

of £500 a year, and when any work of consequence was done they were paid 3 per cent. on the total cost of the building which either of them had to do with. At Buckingham Palace Nash was paid 5 per cent. after 1826, when the salary was dropped, and Blore had the same when he built the east front in Buckingham Palace Road. Wyatville received 5 per cent. for his Windsor Castle job, but that included the cost of coaches to and from Windsor. This expense must have been a considerable item for a man of his style and the conditions of travelling then.* Sir Charles Barry made a bad bargain over his fees for the Houses of Parliament, having at the initial stage of his appointment agreed to a fixed fee of £25,000; but at that time the estimated cost was £800,000, exclusive of fittings and furniture, whereas the cost came to about £1,600,000 and the work took almost a lifetime to execute. Pugin was paid £200 a year by the Government to help Barry, who up to 1849 had furnished between 8,000 and 9,000 drawings. He also paid for some 3,000 casts of mediæval ornament. Ultimately, after years of negotiations and petty wranglings on the part of various Ministers of State, he had to be content with £25,000 and 1 per cent. grudgingly added for measuring and on the cost of various heating projects which had given the architect endless trouble. Other architects were paid 5 per cent., as in the Pavilion at Brighton, the British Museum, National Gallery and Kensington Palace.† Sir Gilbert Scott's fees on the Home and Colonial Offices in Whitehall were 5 per cent., but he had to prepare several schemes to satisfy Lord Palmerston, who obliged him to give up the Gothic design by which he won the competition in 1856 as settled by a Commission. The awards really were in favour of H. B. Garling for the War Office, and Coe and Holland for the Foreign Office; Scott being put third, while Sir Digby Wyatt was put in for the India Office. It was necessary to say this here to explain the barest of facts in reference to a controversy extending for years. The cupolas of the Whitehall front have not yet been built, an omission which spoils the building and is a great injustice to Sir Gilbert Scott. The cost of the Law Courts in the Strand came to £871,966, on which amount G. E. Street was paid £35,000, or about 4 per cent. I cannot tell you exactly what the Natural History Museum cost and at what rate its architect was paid, owing to variations and deductions, but so far as Mr. Paul Waterhouse has been able to ascertain 5 per cent. approximately was the scale of remuneration. This inquiry cannot conveniently be extended to more recent contemporary public works, as the architects might consider it too inquisitive, and with the War Office and Public Offices completed by the Office of Works owing to the early decease of Wm. Young and J. M. Brydon, the application of these buildings as instances in point is precluded.

From the writer of Ecclesiastes onwards the idea has prevailed that in the making of many books there is no end, while the difficulty of housing them remains a greater problem than ever. I have mentioned in my attached list of architects some of their more notable books published during the last hundred years, but according to Lord Rosebery most books of all kinds are not only dead but buried as well. Certainly this is true about a vast number of technical publications on the art of building, useful enough in their day, and few once influential works on architecture actually survive. I am not intending to weight this page with a catalogue of the hundred best books on the subject. It would be folly to belittle architectural books, for they are essential as working tools to the modern architect, whose acquaintance with a few good ones should be personal and intimate, though it is best to avoid a mere passing familiarity with a multitude of indifferent compilations the output of which, like many modern curricula of education, is overdone, bearing little upon the essentials of life's actualities. The superfluous accumulation of transient matter necessarily embodied in the professional press tends to overwhelm many records of permanent value not to be found in any books or encyclopædias, which speedily get out of date. Without these newspapers much of real consequence would be lost. When I gave a lecture in 1907 at Newcastle-on-Tyne on "Architectural Journalism," I furnished the names and particulars of the architectural periodicals of the world then current, my list being published in the R.I.B.A. JOURNAL, Vol. XIV. No. 9, with a report of that lecture. I need not therefore dilate further upon the real importance of the professional journals as a factor in the development of architectural progress. Whatever the merits or shortcomings of these prints may be, their character is pretty much what the architects of the day make them, their standard being dependent upon the works of the generation they represent, neither more nor less.

The Gothic Revival, as we have already said, was a tangential departure, and not an evolution by which in imperceptible degrees one style grew out of another. The result was chaos, and it would be difficult to decide as to when and to whom emancipation was due. A certain class of progressive antiquarians even now assure us that darkness prevailed till the advent of the pre-Raphaelites. Others date our Renaissance from the birth of the

* Sir Jeffry Wyatville was relieved of the work of measuring on this account, and he had a residence assigned to him in Windsor Castle, free of charge, during the whole of the time he was employed on the works of that building.

† The following is a list of other important public buildings upon which their respective architects received 5 per cent. since 1832:—The General Post Office; the State Paper Office; Whitehall Chapel; Westminster Hall; Museum of Economic Geology; Money Order Office (St. Martin's-le-Grand); St. Katherine's Hospital, Regent's Park; Chapel Royal, St. James's.

Arts and Crafts Society, fortified by the archæological cave-dwellers of the anti-restorationist crusade. We might perhaps be more convincing to them if we spoke slightingly of "the so-called Gothic Revival" which was brought about after Prout had touched the heart of the public and unsealed its eyes to the picturesque. Pugin with his doubtful analogies, and Ruskin with his false taste for naturalesque sculpture in ornament, had at least instructed and roused public opinion. The educated classes were thus prepared to co-operate, and architects, to make themselves fit, measured details and studied mouldings, but somehow missed the inspirations of the mediæval soul, as they borrowed fragments which became lifeless and uninteresting. It was just the same in France. Viollet-le-Duc, with all his knowledge and power of draughtsmanship, could produce little himself, and Heideloff, the German "scholar architect," was in the same position. Some of our best lecturers and demonstrators also, with all their degrees, prove no exception. At the precise time of which we are thinking the vital character of arch and vault, the constructive ideals of mediæval work, were regarded as so much perplexity and as an inconvenient mode out of harmony with modern sculpture and painting. To judge fairly we must not forget that that was the outlook then, but time and the erection of the new Palace at Westminster, aided by the Oxford movement, opened up an opportunity for newer notions. Religious worship inspired the pious poems of John Keble, and the Tractarian influence of Froude, Newman, Pusey, and Hope gave a progressive power to church and college building. James Savage had some time before built St. Luke's Church, Chelsea, 1824. St. Peter's Church, Brighton, by Charles Barry, followed in 1826; and J. C. Buckler designed Costersey Hall, Norfolk, 1825.

R. Abrahams had built the Middle Temple Library,* Welby Pugin had designed St. George's Cathedral, Southwark, in 1845; while in the same year the Church of St. Stephen, Rochester Row, was built by Benjamin Ferrey, the year following the erection of St. Andrew's Church, Wells Street, by S. W. Dawkes. The Hall and Library in Lincoln's Inn Fields, by P. Hardwick, date from 1843, though it is said he did not really design them. When the Government advertised the Houses of Parliament competition in 1835 the conditions prescribed "Elizabethan or Gothic." Four premiums of £500 each were offered, and ninety-seven competitors sent in plans. Charles Barry won the prize and was forty years of age when King William IV. confirmed the award of the Commissioners and elected him architect early in 1836. The Classicists fought against the verdict, and Welby Pugin, who had not competed in his own name, plunged into the subsequent fray with all the ardour of his enthusiastic temper. Barry and Pugin had previously co-operated when King Edward's School at Birmingham was built in 1833, and it was in that building that Barry discovered Thomas, the stone carver who carried out so much of the work at Westminster. The controversy as to how far Welby Pugin was the author of the Houses of Parliament ended, as it had begun, in the conclusion that the general conception and magnificent lay-out of the plan belonged to Barry, and that Pugin detailed it. The foundation stone was laid in 1839, and it is evident that Barry's love for Egyptian surface enrichment favoured Pugin's encrustation, so to speak, of the façades with endless florid detail. The conception of the scheme is eminently Classic in its distribution, which shows Barry's personal predilections for balanced symmetry. The Birmingham school just named precisely illustrated the same combination of authorship.

Everyone knows what an excellent draughtsman Welby Pugin was, but those who are not familiar with the drawing in Ferrey's Life of this great architect may not remember that at so early an age as thirteen Pugin made a first-rate sketch of Christ Church Priory, realising the architecture of that remarkable building fully expressed. A bird's-eye view of his church and convent at Ramsgate is included in the Phené Spiers' collection of historic drawings hung in the Victoria and Albert Museum. Pugin was quite a character; his slovenliness in dress made him appear eccentric, and sometimes he dressed like a sailor. Entering a first-class railway carriage at Dover he was accosted with "Halloa, my man, you have mistaken, I think, your carriage." "By Jove," was his reply, "I think you are right; I thought I was in the company of gentlemen." He then showed his portfolio of sketches made in Normandy, from whence he was returning.

While Pugin was busy in 1837 with the drawings of the new Palace at Westminster, "in the composition of the river front," the centre wings and tower, he was engaged in erecting St. Mary's College, Oscott, and Scarisbrick Hall. Simultaneous entries in his diary put this beyond question. His first church was St. Mary's, at Derby. Talbot Bury and Benjamin Ferrey I knew, and having worked with Pugin for Barry, they all three gave Sir Charles the full credit for his design as a whole. The work carried out all over the United Kingdom by Welby Pugin stands as the best evidence of his claims, as at St. Gregory's Priory, Downside, the cathedral-like church near Hereford, St. Chad's, Birmingham, three churches at Liverpool, more at Manchester, Leicester, and Cambridge, and St. Giles', Cheadle, which for its size was the most costly of them all. Killarney and Newcastle show others. Lord Dunraven's seat at Kildare in Ireland, and Bilton Grange, Warwick, are examples of his domestic work. The Pugin Travelling Studentship, founded

* Known as "Little Bethel" because Sir Richard Bethell, Solicitor-General and Member of the Middle Temple Bench, obtained this work for R. Abrahams, who was his brother-in-law.

by subscription at the R.I.B.A., was first held in 1865 by Mr. Tavenor Perry, who built part of the Hôtel Cecil facing the Embankment.

Sir George Gilbert Scott, at the outset of his career, erected many workhouses and such-like buildings. Other Gothic celebrities were S. W. Dawkes, who erected Colney Hatch, and Benj. Ferrey, who built Dorset County Hospital in 1839. Scott was articled to Edmeston in 1827, and in 1834 he helped Kempthorne, an expert in workhouse projects, after serving a time with the builders, Peto and Grissell. Scott's connection with Moffatt began in 1835, after which the firm went in seriously for Poor Law enterprises, and carried competitions before them with business-like foresight in such a way as to obscure some other considerations. Influenced by Storer's "Cathedrals," which came out in 1814-19, Scott turned his attention subsequently to mediæval work, and the Cambridge Camden Society woke up matters in favour of Ecclesiology, which was inspired largely by Pugin. Curious to relate, Gilbert Scott obtained his first church, St. Mary's, Stafford, through his connection with the Poor Law Commissioners. He had realised the shortcomings of the Gothic church at Windsor, built in 1822 by C. Hollis. This building was remodelled internally by Teulon in 1869.

Scott characteristically went in to win, and so adopted a popular style, as at St. Mary's, Wakefield, and he won much favour by his capable church of St. Giles at Camberwell (1841), also by securing in competition Hamburg Cathedral in 1844, on which design he had the help of Coe and Street. The Camden Society, being more liturgical, advocated Butterfield and R. Carpenter. Churchmen looked askance at Scott's partnership methods with Moffatt, which connection was concluded in 1845. Scott obtained the surveyorship of Westminster Abbey when Blore retired in 1849. The Chapter House was restored by Scott, who built the new north portals. The upper part of this transept façade was the beautiful design of J. L. Pearson. It is difficult to understand the cult of the anti-repairist, but a painter friend of mine, "a whole-hogger," as they say, in anti-everything, confided to me his opinion that it would have been far better to have built a plain stock-brick wall, if this front really did need repairing, and that would have better expressed, as I understood him, the speechless poetry of modern architectural capabilities. He firmly believes Wren's patched-up, decrepit elevation to have been a more articulate evangel of architecture. Those who would like to see what that mix-up was like will find a capital reproduction of the Clerk of Works Dickenson's draught, signed as "approved" by Wren in 1719, printed in the *Building News* for October 26, 1888. In repairing the internal masonry and the cloisters Scott used shellac to indurate the stonework, and considered the results highly satisfactory. Professor Lethaby (whose book *Westminster Abbey and Craftsmen* I treasure among my very best valued volumes), speaking as the surveyor in charge of the Abbey, tells me that after a while Scott's solution tended to form a crust on the surface, which peeled off, so that the brown colour of the Purbeck marble columns has gone curiously white in the north transept. Professor Church recommended as a better preservative a solution of baryta in water, and at Hampton Court this was also largely used, with good results so far. On the top of the baryta Mr. Lethaby advocates a *tinted* coat of lime-wash to form a skin. Some thought he wanted to white-wash the Abbey.

In 1853 Scott built the much talked-of Church at Doncaster, when E. B. Denison, afterwards known as Sir Edmund Beckett, and subsequently as Lord Grimthorpe, acted as candid friend, giving Scott much to interfere with his devotional exercises. The west window, erected years afterwards by Lord Grimthorpe at St. Alban's Abbey, with an arched cill added, was based on Scott's Doncaster design, which Denison twitted Scott for borrowing from elsewhere.

The competition for the Foreign and Colonial Offices in Whitehall was taken part in by 218 other architects, and I have already mentioned how Scott was chosen, and how he was served, but I did not say that Sir Digby Wyatt's work was confined to the interior of the India Office; the contrivance of some rooms badly fits the exterior, but much of his ornament is extremely clever. It is impossible in a paper of this kind to do justice to such a personality as Sir Gilbert Scott. His work was enormous, and his capabilities such as would have made him distinguished in any age. The letters I have retained from the mass of correspondence which reached me as Hon. Secretary of the Scott Memorial dealt with his individuality in such diverse ways that the opinions so expressed were most amusing. James Fergusson said he "did not share in the unbounded admiration for the art and character of the late Sir Gilbert Scott which it is now the fashion to express." Lord Grimthorpe would have nothing to do with the memorial, and, wishing to have a fling at something, violently attacked the Architectural Museum, refusing to aid in "galvanising so hopeless an undertaking as a private speculation." Well, time has proved the wrong-headedness of Grimthorpe, and as to the other objectors, it is a matter now of no moment.

Sir Gilbert Scott founded the Architectural Museum in 1851. It originated in the sale of Cottingham's Collection, and was based on Bruce Allen's idea of a school of applied art for workmen. Street and Butterfield did not encourage the project, but Alfred Waterhouse and Mr. Norman Shaw always supported it. Scott engaged Gerente of Paris to get together a vast number of fine casts from France. Sir Bartle Frere gave a splendid collection of marble reliefs from India; Ruskin added more carved treasures, also his Venetian

collection. Joseph Clarke, Ewan Christian, and J. P. Seddon proved its best friends. A wharf was rented in Cannon Row, and here the Earl de Grey presided in the cockloft while Ruskin lectured and Beresford Hope found the ways and means. The casts were removed to South Kensington, then in its embryo stage under Henry Cole, of whom more presently; but the Museum casts were too much absorbed by the larger assemblage, and so later they were brought back to Westminster, where in Tufton Street the Museum quarters had been erected by Ewan Christian and Joseph Clarke as hon. architects. I was Hon. Secretary for twenty-five years during the presidentships of Beresford Hope, Lord Alwyne Compton, Bishop of Ely, the Duke of Westminster and Sir William Emerson. Dean Stanley I knew also in this connection. To provide a home for the Architectural Association day and evening schools in 1902, which every other means had failed to secure, I proposed, and with the concurrence of the Museum Council and subscribers brought about, the free gift of our buildings and their contents, subject only to one condition, viz. that the Architectural Museum should be maintained for the free use of the public as heretofore for ever. The future of the Architectural Association absolutely depended upon the possession of larger accommodation for its classes, therefore the above offer at this juncture saved the situation and was gladly accepted. The subscribers to the Museum having been lessened by death, it had been necessary to ensure an income for its upkeep, which however had never depended upon the architectural profession at large, neither had the Institute ever afforded the Museum any material support; consequently many years prior to 1902 a school of art affiliated with the Science and Art Department was founded, and I served a long while as its Hon. Secretary. Mr. Fred Brown and Mr. Mouat Loudon in turn were the head-masters. Ample means were thus obtained to secure the prosperity of the Museum. To meet increased demands for accommodation in new studios we obtained more land and enlarged the premises, the Life School becoming actually foremost in the metropolis. The gift of the Museum was not, therefore, in any sense due to financial difficulties, and I am careful to record these facts because statements have been made in this regard which were entirely incorrect. The premises after the transfer were altered from plans made by Mr. Leonard Stokes, who was employed by the A.A. Committee; and thereby hangs a tale. Sir Gilbert Scott rests in Westminster Abbey, and G. E. Street designed his memorial brass.

The Professional Societies of Architects must not be overlooked. The first dates from 1806, with John Woods, architect of George Yard, Lombard Street, as President. James Savage and James Elmes were the Vice-Presidents, Mr. Bushby being Secretary. Every member was expected to present annually an essay on a subject connected with civil architecture, or forfeit half a guinea. Fines and papers belonged to this London Architectural Society. The subscription was £2 2*s*. a year.

The Royal Institute of British Architects was constituted in 1835, and incorporated in 1837. Earl de Grey was the first President, Prof. Donaldson and John Goldicutt being Hon. Secretaries. Its genesis may thus be briefly stated. On 8th Jan. 1834, a meeting took place, in Freemasons' Tavern, of architects and surveyors to found an architectural institution. Mr. Elmes took the chair at a subsequent meeting on the 13th of the same month, when it was agreed to term the institution "The Society of British Architects." An amendment terming the body "The Wrennian Society" was negatived, the proposal being objected to owing to its reflection on the extremely diminutive size of the gathering. In 1835 "the Architectural Society," instituted in 1831, only numbered fifty-one members at 35 Lincoln's Inn. Mr. Bernard Clarke was the President. In 1838–9 Sir W. Tite was President, and Richard Halliwell Hon. Secretary. J. A. Bell in 1834 published a letter addressed to Lord Farnborough, the eminent authority on parliamentary procedure, urging the need of a chartered society. The Society of Architects and Surveyors and the Society of British Architects formed a coalition in 1842. The first meeting of the Institute, however, was held in "The Thatched House Tavern," St. James's Street, in July 1834. The opening general meeting took place in June 1835. The Society of Architects as a new body was started in 1884, when the promoters had in view the establishment of a more direct connection between craftsmen and architects than the Institute encouraged; but those whose object was the establishment of statutory registration of architects proving to be in the majority, J. M. Brydon and others who attended the preliminary meeting, including myself, retired from the project, being on the main lines of professional policy pledged as loyal members to the Institute. This Society promoted several projects for Registration and proposed Bills before Parliament unsuccessfully. The Council of the Institute, in 1911, having adopted the policy of promoting Registration, promulgated a scheme to admit the Society's members on certain conditions formulated by both bodies, but, so far, the proposals for bringing about this happy combination have not met with the approval of the General Body of the Institute.

The advent of the 1851 Exhibition was regarded as an epoch-making event, but the immediate results proved that the project had been somewhat over-estimated. Some curiously ugly exhibits were permitted. Joseph Paxton, a gentleman's gardener, designed the buildings, which were re-erected at Sydenham as the Crystal Palace. It is doubtful if any architect of his day would have carried out so difficult a task so well, and I reckon Paxton's palm-house at Kew to be a very clever and tastefully treated conservatory. Sir Henry

Cole, known as "Old King Cole of the Brompton Boilers," deserves suitable recognition, because he started the idea of encouraging the minor arts. He was heterodox enough as to the value of architects, putting his faith in Royal Engineers for such work; and Osborne House having been built in 1849 without a proper architect, the Prince Consort supported Cole in his heterodoxy and backed him up in the scheme for national schools of design to further the *bric-à-brac* method of Victorian art, which, let us hope, we have now outgrown. Having personally taught in a Science and Art Department School of Art and had twenty-five years' experience since then as Hon. Secretary in the Royal Architectural Museum School of Art, I formed a fairly good idea of what its codes and systems were; in fact, we ignored many of its rules, and appointed outside masters who were recognised only as "specially qualified persons." The Board of Education transformed and greatly improved Cole's system, and a more enlightened method now obtains, excellent work being done at the Royal College of Art. As one of the Judges for some time in the annual national competitions I had a further intimate acquaintance with a good deal which does credit to the forethought of the much-abused Sir Henry Cole. I may perhaps say that the architectural works sent up from the provincial schools of art for the yearly contests have always been most indifferent, and lately very poor; indeed, the best contributions are those which have already done duty in the Institute Prize Competitions, which I think should be excluded. As to Cole's preference to Engineers, it must be admitted by the impartial that Lieut.-General Scott's Science Schools in Exhibition Road, detailed by Godfrey Sykes, show quite the best example of modern terra-cotta yet erected in England, and the front of the building holds its own, architecturally speaking, with the Victoria and Albert Museum in really quite a notable way.

William Butterfield is first found recorded as a student member of the Architectural Society in 1831 at the age of seventeen, but he joined no professional body afterwards, and only agreed to accept the Royal Gold Medal of the Institute in 1884 by deputy. His influence was considerable and his work masterly. The College of St. Augustine at Canterbury, built in 1845 at the cost of Mr. Beresford Hope, was his first important building. All Saints' Church and Clergy House, Margaret Street, five years later, revealed the possibilities of brick and created much controversy. St. Matthias', Stoke Newington, Balliol College Chapel, Oxford, which some vandal wanted to pull down last year, and St. Alban's Church and Clergy House, Holborn, 1858, displayed his genius. Keble College, Oxford, was erected in 1867. Not one of Butterfield's contemporaries evinced more originality or less regard for convention. He invented the "streaky bacon style" of parti-coloured brickwork, and was so enamoured of his patternings that finding creepers growing on the walls of one of his buildings he had them cut down and concrete added round the footings to prevent any sort of growth hiding his work in future. John Loughborough Pearson, R.A., also of a retiring temperament, was equally original, and produced buildings unsurpassed by any man of his time. The spire of his first London Church, Holy Trinity, Bessborough Gardens, 1852, is a most beautiful structure seen from any point of view; and St. Peter's, Vauxhall, the first modern church vaulted throughout in brick and stone, 1864, set an example for many others to follow. St. Augustine's, Kilburn, St. John the Evangelist, Red Lion Square, St. Michael's, Croydon, St. Agnes', Liverpool, St. Matthew's, Auckland, N.Z., and St. Stephen's, Bournemouth, as well as Hove Parish Church, not to mention Truro Cathedral, suffice to distinguish Pearson as a master of the first degree, combining a study of Continental work with a recognition of English tradition, and as a church-builder fully realising the requirements of a modern church. The Catholic Apostolic or Irvingite Church at Maida Vale was one of his last buildings. Raphael Brandon's church in Gordon Square, for the same body, opened in 1854, has never been surpassed for its similitude to a mediæval building of cathedral-like proportions. Mr. John Belcher, R.A., supervised the Early English carving of the capitals of the interior a few years ago.

J. P. St. Aubyn was among the first English architects of the Gothic revival to recognise the importance of local modes and texture, his church work in Cornwall being studied in this way. It is a matter of regret that he did not retain more of the historic old screen work and wood fittings in some of the churches he repaired.

The series of churches built by James Brooks rise to the level of high distinction, and I only regret that space precludes a full description of his architectural achievements, his starting patrons being Richard Foster and Robert Brett for the churches which he built in East London—St. Michael's, Shoreditch, St. Chad's, Haggerston, and St. Columba's, Kingsland Road—during the sixties. Other notable works are the Hospital of St. Mary at the Cross, Shoreditch, and St. Saviour's, Hoxton, St. Andrew's, Plaistow, and St. Mary's, Hornsey, in which church Brooks tried his hand at the last phase of Gothic—the Perpendicular. Sir Charles Nicholson has recently added a sumptuous altar-piece in harmony with the building. St. John's, Holland Road, one of Brooks' most noble buildings, has been spoiled by the dismal and incoherent west front added last year; this is to be deplored, as I think his original design, with the western tower, was perhaps the best that he ever conceived. Brangwyn's fine drawing of it will be found in the *Building News* for April 4, 1873. The design Brooks made for Liverpool Cathedral was a great performance.

(*To be concluded in the next issue.*)

THE LATE SIR LAWRENCE ALMA-TADEMA, O.M., R.A.

"ALMA-TADEMA is dead." Numbers when they saw the announcement knew that in consequence the world would be a good deal poorer for them.

I have been asked to write a few lines of personal appreciation of one who rendered to our Institute inestimable service. Few words from me are necessary, for he must have been well known to all who are sufficiently interested to attend the Institute meetings.

His strength of character, his shrewdness and overwhelming kindliness were seen at once in his features, though his fastidious taste, his love for his fellow-creatures, and his tenderness might not have been so readily recognised under a somewhat rugged exterior.

A great lover of architecture—indeed, I think if he had not been a painter he would have been an architect—he was always ready to give up his time for the furtherance of our art. During the time I was President he never denied any request I made to him on behalf of the Institute, and the experience of others, I believe, is the same.

He painted two of our Past Presidents, John Whichcord and George Aitchison, the latter a very fine work, as it has always seemed to me, designed in a decorative manner, but giving an excellent portrait of Aitchison. Speaking of this portrait he said to me, "It is so nice painting the face of an old friend. I know nothing more delightful."

He assisted us in the selection of the painters of our Past Presidents, and our collection owes much to him. He also designed and drew a charming invitation card for the Dinner held by the Institute during the International Architectural Congress under the presidency of Mr. Belcher.

The house in Grove End Road which he built for himself has always been of great interest to architects. In it he and Lady Tadema dispensed their boundless hospitality, not only to English, but to persons of all nationalities interested in art in any form, and we must hope some means may be found of preserving it. The entrance with the narrow panels filled with pictures as love-tokens from his friends, the refined and ample studio with its splendid light, and the smaller ones equally interesting in their way, all, including the garden, leave a vivid impression of the man.

Of his art it is not for me to speak here, but the picture in this year's Academy indicates the man, the still life painted with all the old care and skill, though in the intervals of his last illness.

Blessed with a marvellous memory, he used it amongst other ways to give kind little personal touches in the greeting of his friends, no matter how many he might see in a single evening, and he had the gift of giving you the impression that you of all persons were the one he desired to see. As a *raconteur* he was unapproachable, in spite of an accent he never lost and which made him sometimes difficult to follow, and he was a bold man indeed who ventured to tell him a story thinking it might be new to him.

He was a personality in whatever company he found himself; he held all art in high esteem; and his wonderful shrewdness, combined with a great kindliness of heart, made his criticisms much sought after by his brother artists, for while his criticisms were well informed and searching they left no hurt behind.

These words, written hurriedly, can but feebly express the sorrow which we feel for the loss of a great artist, a great man, and a great friend, for we can still hardly realise the news and what it means that "Alma-Tadema is dead." R. I. P.

27*th June* 1912. ASTON WEBB.

Sir Lawrence Alma-Tadema was born on the 8th January 1836 in the little Frisian village of Dronryp, near Leeuwarden, in Holland. The Tademas had been natives of this region from early times, and their name occurs again and again in the legends relating to the formation of the Zuyder Zee. His father, Pieter Tadema, a notary, died when the future painter was only four years old. His artistic talents were early revealed. At the age of thirteen he painted a portrait of his sister, which was accepted and hung at one of the Dutch exhibitions. Two years later he painted a portrait of himself. Talents and inclinations alike pointed towards art as a profession, but his mother and guardian desired that he should follow his father's profession, and in order to meet their views he endeavoured to reconcile the two vocations. A severe illness brought about by overwork was the result, and he was at length allowed to follow his bent and to take up the career of an artist. Going to Antwerp he began his studies at the Academy of Art under Wappers, and made rapid progress. His next master was the celebrated Baron Leys, to whose teaching he owed much of the historical accuracy and love of detail which always characterised his work. He assisted Leys in painting the frescoes for the Antwerp Town Hall. Seeking inspiration for his early pictures in the legends of Carlovingian days, he attained a considerable measure of success, his first gold medal being awarded him at Amsterdam in 1862. Three years later he moved to Brussels, where he remained until he took up his abode in London in 1870. Meanwhile, from the ancient Franks the gifted painter had passed to the still more ancient Egyptians, one of his most notable works at this period being "The Death of the First Born." While still at Brussels he had painted many pictures illustrating Roman life and manners, including perhaps his finest, the magnificent "Tarquinius Superbus," which has been described as "a triumph alike of execution and of dramatic intensity without dramatic violence." In England he quickly achieved popularity. He had already exhibited at the Royal Academy before finally settling here, his first picture at our great annual show having been "The Pyrrhic Dance,"

exhibited in 1869. In 1876 he was elected Associate of the Royal Academy, and in 1879 was admitted to full rank as Academician. He was knighted in 1899, and received the Order of Merit in 1905. Dublin University conferred upon him the degree of Litt.D., and Durham that of D.C.L. He was a Fellow of the Society of Antiquaries, and member of the Royal Society of Painters in Water Colours. Of his foreign distinctions the most prized were the Associateship of the Institute of France and the Membership of the "Ordre pour le Mérite" of Frederick the Great.

Sir Lawrence's connection with the Institute dates back to 1877 when he was elected Hon. Associate. In 1901 he was raised to the class of Hon. Fellows, a distinction he always referred to with pride and gratification. His fine appreciation and profound knowledge of architecture, not only on its artistic but on its practical side, won for him from the Institute in 1906 the award of the Royal Gold Medal for Architecture. His claims to this distinction cannot be better conveyed than in the words of the then President, Mr. John Belcher, R.A., who in making the presentation said :—

We have all admired the fine architecture which is so beautiful a feature in many of Sir Lawrence's pictures. Before we speak of that, however, let me tell you, what probably some may not know, that Sir Lawrence *is* an architect. If you have had the privilege of examining the house and studio which he has built for himself in St. John's Wood, you will have recognised the hand of a master in every part of it. Not only is it an interesting and delightful building for the ordinary visitor, full of beautiful features which meet you and surprise you at every turn, but it possesses also many details which are worthy of the architect's careful study. The smallest and most insignificant details, in fact, such as would probably escape the layman's attention altogether, have received an amount of thought and care which is both unusual and suggestive. I learnt much that has been useful in Sir Lawrence's house, and its many novel and effective features impressed me greatly. . . . "To copy and imitate is death to art" is one of Sir Lawrence's principles, and though his archæological knowledge and skill are beyond dispute, and in respect of certain periods and countries unrivalled, yet in his own house he has known well how to be original—both in the arrangement of the plan and in the adaptation of forms and materials to his particular purpose. All is fresh and beautiful, and parts of the house possess a character and environment which would make a Roman of the times of the Empire feel quite at home—even in St. John's Wood. . . .

His research has been of the widest scope. He has not been content with studying the grand structures and remains of ancient buildings. He has ventured amongst the tombs, both Etruscan and Lycian. He has had an eye for Assyrian bas-reliefs, terra-cotta slabs, and all those miscellaneous relics which are to him who knows how to read them a revelation of the history of the past, an index of the power and spirit of vanished nations. This is how it is that Sir Lawrence has been able to use his great gifts to portray for us the architecture of the past, particularly of Rome, in all its magnificence. He is never satisfied with a mere suggestion or rough indication of a building. Every single detail, each moulding or other ornament, is most carefully and truthfully set forth. It must be the best of its kind too—something selected for its beauty, and finished and refined with perfect taste. What a wealth of material, too, he employs, and how he revels in the expressive qualities of each kind! Has anyone else presented, or will anyone ever present, the translucent properties of marble so well as he? Whether it be marble, stone, bronze, or silver, he has studied the forms most suitable to each, that everything may be perfect both in form and colour. And then he portrays the whole for us under the sunny skies of Italy, that the beauty of the artist's work may be lighted up and intensified by the beauty and glory of the world of nature!

Sir Lawrence's architectural knowledge was strikingly displayed in the series of designs which he made for Sir Henry Irving's scenery to illustrate Shakespeare's play of *Coriolanus*. The work is admirably described in minute detail in a pamphlet entitled "The Architecture of *Coriolanus*" published by Mr. R. Phené Spiers, F.S.A., in 1901, and finely illustrated from the artist's original designs.* Mr. Spiers refers to "the constructive genius of Sir Lawrence, which suggests that if he had not elected in his younger days to become a painter he might have taken a remarkable position as an architect. His interpretations, based on the most profound archæological research, of the variety of design in Etruscan architecture, comes to us virtually as a revelation."

Sir Lawrence contributed on many occasions to discussions at the Institute on subjects in which he was interested, and never failed to respond and to delight his audience when called upon to speak at the Annual Dinners and other functions. The sentiment of marble and of marble-work which found such masterly expression in his pictures was conveyed verbally in a scholarly Paper on "The Ancient Applications of Marble" which he read before the Institute in January 1907.

THE LATE SYDNEY SMIRKE [*F.*].

By the death of Sydney Smirke, of St. John's Road, Richmond, Surrey, on Wednesday, 5th June 1912, at the age of seventy years, the Institute has lost a genial and generous friend, though not very well known to the present generation of members.

In 1875 he married, in Philadelphia, Miss Jane Croucher Friend, of Penzance, Cornwall, who survives him. He leaves one son, an engineer, and two daughters, both of whom worthily sustain the traditional artistic abilities of the family, particularly the younger one, whose pictures are frequently seen at the Royal Academy, where she first exhibited at the age of seventeen.

Mr. Smirke was the eldest of seven sons of the distinguished architect Sydney Smirke, R.A. (one time Treasurer of the Royal Academy, Trustee of the British and Soane Museums, and R.I.B.A. Gold Medallist), and he was a nephew of Sir R. Smirke, R.A., Architect, and of Sir Edward Smirke, Judge and Master of the Stannaries. He was a grandson of Robert Smirke, R.A., Painter to the Court, whose

* The Library has a copy of this work, but it is now out of print and has become rare.

skill as an illustrator of the works of Shakespeare and other dramatists is well known. He was educated at Uppingham and Leipsic, and was trained for his profession in the office of his father.

To many readers of this Journal the present biography may seem like a romance rather than the life story of an architect. Unfortunately many thrilling and humorous anecdotes must be omitted, from lack of space and incomplete data.

Mr. Smirke's son says that his father's first architectural work was a block of Almshouses in Guildford. Soon after its completion he was suffering from severe eye-strain, and it was decided he must give up drawing. From that time onward for several years, Mr. Smirke's career, as known to his relatives and friends, became one of roving adventure, with intermittent periods of architectural work in various parts of the world.

On leaving England he went first of all to New Zealand, where, at the age of nineteen years, he and a friend became joint owners of an island and started sheep-farming. When the great Maori war with England broke out, he and his partner defended themselves for a fortnight in a small hut, and all their loyal native shepherds were killed. After the war he abandoned his share of the island, returned to professional work on the mainland, and erected various public and private buildings. Receiving a commission to carry out some work in Australia, he went there next, and then finding nothing further to do, he tried his hand once more at sheep-farming. From that he turned to gold-digging, one large nugget falling to his share, though it was subsequently stolen by a companion. Deciding to return to New Zealand, he embarked on the *Northumberland* with several other passengers and a shipwrecked crew, many of whom were lost on that voyage during a typhoon. Soon after sailing from New Zealand to England, he was shipwrecked off Cape Town, his being one of the few lives saved. He spent some time in South Africa, penetrating far into the interior. This was followed by a short visit to England and a trip to Argentina, where he rebuilt Messrs. Liebig's factory and assisted the lay-out of the first Argentine railway. From Argentina he proceeded to Paraguay. On war occurring with Uruguay, he and five other Europeans were locked up in a fort. Provisions giving out, Mr. Smirke devised means of escape to join the first English ship coming down the river, but he alone survived while they were swimming to the vessel. He again returned to England, where he found his relatives in mourning for him. His next enterprise took him to Peru, in which country he was responsible for the erection of several villas and other buildings. Then came the war between Peru and Chili, and again he was imprisoned. Fever breaking out in the fort, he volunteered to join the Peruvian forces, and in one engagement was severely wounded, but was afterwards present at the bombardment of Lima. After this excitement he made a daring attempt to cross the South American continent from Quito to Para, but finding the natives very hostile and not wishing to cause loss of life, he turned back, but some years later he was more successful, owing to the native population having been decimated by small-pox. After travelling extensively across South and Central America, he went to the United States, where an architect named Diaper and he became partners, erecting asylums, churches, and other buildings of which no particulars seem to be available. Mr. Smirke was present at the great fire of Chicago, where, through the influence of Mr. Cyrus S. Field, he anticipated a considerable amount of work, had not an attack of ague laid him up for eighteen months. He designed and laid out the Philadelphia Exhibition of 1876, of which his family have a large aerial perspective, drawn by himself, to which he added buildings as they were erected.

Unfortunately there are insufficient particulars known of such adventures as his presence, by request of an old family friend Lady Franklin, with an expedition in search of her husband, the great explorer; nor of certain missionary trips with Bishops Selwyn and Coleridge Patteson among the Polynesian Islands, and of other visits to West Africa and the Malay Peninsula.

Mr. Smirke became a Fellow of the Institute in 1888, his proposers being the late Messrs. Arthur Cates, Arthur Green, and Wyatt Papworth. It will add to the completeness of these notes to quote Mr. Smirke's own account of his professional career as given on the official form sent in with his application for Fellowship:

1855–1862. In the office of Sydney Smirke, R.A.
1862–1870. Travelling and settled in Philadelphia.
1870. Started practice in Philadelphia, U.S.A.
1874–76. Exhibition Buildings at Philadelphia; St. Mary's Church, Philadelphia, and several other buildings.
1877–79. Travelling in Europe; several residences at Biarritz.
1880–84. Residence for Mr. Robinson, Sea View, Isle of Wight; manufacturing premises for Mr. Abrahams; a number of shops, cottages, &c., for Mr. King at Barking; four large residences at Surbiton Hill.
1885. Residence for Mr. Broughton; residence for Mr. Spottiswoode; residence for Lady Love Hammick.
1886. Block of stables for Mr. Bannister.
1887. Finishing residences at Queen's Gate, S. Kensington, for Mr. Bannister.
A set of water-colour drawings of Exhibition Buildings, U.S.A., for H.M. the Queen and some of the British Commissioners.

My own friendship with Mr. Smirke began in 1887, by sharing offices with him at 8 Craig's Court, Charing Cross, for about seven years. During that period Mr. Smirke did very little architectural work, but he became a useful member and Chairman of the R.I.B.A. Literature Committee, and was on the Council of the Architects' Benevolent Society. He was an excellent draughtsman and water-colourist, rather disliked any trifling with the severer forms of classic architecture, but took an artist's keen delight in real good work of any description. The lion water basins in the portico of the British Museum were designed by him. The main building there, it will be remem-

bered, was designed by his uncle Sir Robert Smirke, and the Reading Room by his father.

In the last few years of his life the old eye trouble developed, and he became towards the end quite blind. He bore ill-health with unfailing fortitude, remarking to me once, "I do not mind, for I have had a good time."

Such is a brief account of a remarkable man one is proud to have known, who, through all his extraordinary adventures, never forgot he was an architect and practised his profession whenever an opportunity occurred.

A. O. COLLARD [*F.*].

May I add a few words to the above most interesting note, which I have read with much pleasure? I first met Sydney Smirke (many years ago now) on his return from one of his romantic expeditions, when he paid a visit to the late Mr. Arthur Cates, who was a pupil of Sydney Smirke's father. Sydney Smirke was a delightfully simple and good-natured man, full of enthusiasm for his profession, and a keen critic of the peculiarities of the "Modernists" in architecture. I can well understand his "companion" taking advantage of him and stealing the large nugget of gold referred to by Mr. Collard. I saw Mr. Smirke a few months before his death, when he was submitting with extraordinary patience to the dreadful affliction of blindness, and I echo Mr. Collard's expression that Smirke was "a remarkable man one is proud to have known."

16*th June* 1912. WM. WOODWARD [*F.*].

THE EXAMINATIONS.

The Final: Alternative Problems in Design.

In accordance with the notice already published in the KALENDAR, the alternative Scheme of Testimonies of Study for the Final Examination will come into operation at the option of the candidates in November next, and after the end of the year 1913 the existing Testimonies of Study for this Examination will be abolished. Six alternative Problems in Design will be set by the Board of Architectural Education each year, and candidates for the Final Examination must submit designs in answer to at least four of these problems. These alternative problems will be published twice a year, three sets in January and three in July. This is done for the convenience of candidates, but it must be distinctly understood that the time for sending in the designs in answer to these problems is strictly limited. Thus the designs for Subject IV. must be sent in to the Secretary R.I.B.A. by 31st August 1912; those for Subject V. by 31st October, and those for Subject VI. by 31st December. (This time will be extended for students in the Colonies; see dates below.) The drawings must be on imperial sheets, and the full name and address of the candidate must be affixed to each drawing. The Subjects for the second half of the year 1912 are as follows:—

Subject IV.

(*a*) A Senate House, on an isolated site, for a modern University, to consist of a Council Chamber to seat sixty persons, with anteroom, waiting-room, and cloak room, and two Committee rooms each to seat twenty persons round a table. Plans, sections, and elevations to be to $\frac{1}{8}$ scale. Details both external and internal to $\frac{1}{2}$-inch scale and shaded.

(*b*) A Bridge carrying a road 25 feet wide between parapets over a Canal 40 feet wide. The bridge may be built of brick, stone, or ferro-concrete. Drawings to be to $\frac{1}{2}$-inch scale and to show complete construction. Important details to 1-inch scale. Calculations to be given.

Subject V.

(*a*) A Picture Gallery in a public park, consisting of six galleries of varying size, but of not more than 8,000 sup. feet in all. The galleries are to be arranged with cloak rooms, &c., so that they can be used for receptions. A room for a Curator and a packing room are to be included. Plans, sections, and elevations to be to $\frac{1}{8}$ scale. Details both external and internal to $\frac{1}{2}$-inch scale and shaded.

(*b*) A Village Church to seat 300. May be in any style, but with complete details of construction. Drawings required to $\frac{1}{8}$-inch and $\frac{1}{2}$-inch scale.

Subject VI.

(*a*) A Colonnaded Screen, 100 feet long, joining two wings of a public building 60 feet high. The screen to have two carriage entrances through it. Shaded drawings to $\frac{1}{4}$-inch scale with 1-inch scale details.

(*b*) A Fire-resisting Lock-up Warehouse on a site 40 feet × 80 feet, with two frontages 40 feet wide to two parallel streets. The site is between buildings so that no light can be obtained on the 80 feet sides.

The building is to have six stories, and each floor is to be capable of sustaining a load of 4 cwt. per sup. foot. Drawings required $\frac{1}{8}$-inch and $\frac{1}{2}$-inch, with $\frac{1}{8}$ full-size details of important parts of any steel construction.

N.B.—A sketch perspective may be included in any of the foregoing, but is not compulsory.

Dates for Submission of Designs.

	Subject IV.	Subject V.	Subject VI.
United Kingdom	31 Aug. 1912.	31 Oct. 1912.	31 Dec. 1912.
Johannesburg	31 Oct. 1912.	31 Dec. 1912.	28 Feb. 1913.
Melbourne	30 Nov. 1912.	31 Jan. 1913.	31 Mar. 1913.
Sydney	30 Nov. 1912.	31 Jan. 1913.	31 Mar. 1913.
Toronto	30 Sept. 1912.	30 Nov. 1912.	31 Jan. 1913.

Attention is called to the revised syllabus (published in the KALENDAR) of the Intermediate and Final Examinations which comes into operation next November. Attention is especially called to Subjects I., II., III. (F.) of the Final.

9 Conduit Street, London, W., 29*th June* 1912.

CHRONICLE.

The Royal Gold Medal, 1912.

The presentation of the Royal Gold Medal last Monday was witnessed by a numerous gathering of members and their friends, the front benches being occupied almost entirely by ladies. Past Gold Medallists were represented in the persons of Sir Ernest George, A.R.A. [1896], Sir Aston Webb, C.B., C.V.O., R.A. [1905], and Mr. T. G. Jackson, R.A., LL.D. [1910]. Special guests included Mr. Champneys' brother, Sir Francis Champneys, Bart. (President of the Royal Society of Medicine), and his son, Mr. A. L. Champneys; Sir Henry Trueman Wood (President of the Royal Society of Arts), Sir Sidney Colvin, and Dr. Thomas Ashby, Director of the British School at Rome. On the walls of the Meeting-room were displayed a large collection of drawings and photographs representative of Mr. Champneys' executed works, an especially interesting and complete set being shown of the John Rylands Library, Manchester. Allusion was made in the President's Address to the Papers which Mr. Champneys has read before the Institute; these, it may be useful to mention, will be found in the Journal, Vol. VII., p. 101 ("The John Rylands Library, Manchester"), and Vol. X., p. 205 ("The Planning of Collegiate Buildings").

The Outgoing President: Portrait by Mr. William Orpen, A.R.A.: Vote of Thanks.

Another interesting feature of the closing Meeting of the Session was the unveiling and formal presentation to the Institute of the portrait of the President, painted for the subscribers by Mr. William Orpen, A.R.A. With the close of the Meeting Mr. Stokes' term as President expired, and advantage was taken of the occasion to tender to him the thanks of the General Body for the services he has rendered the Institute during his tenure of the Presidential Chair. The dual function of unveiling the portrait and proposing the vote of thanks was performed by Mr. John W. Simpson, *Vice-President*. Addressing the Meeting, Mr. Simpson said:—

Ladies and Gentlemen,—It is with peculiar pleasure that I rise to fulfil the duty which has been laid upon me, of unveiling the portrait of the President, and of offering it on behalf of the subscribers to its cost as a gift to the Royal Institute. [*Unveils the portrait.*] I think that members need not be afraid to look this gift-horse in the mouth. The portrait is a characteristic one, and Mr. William Orpen—who I am sorry to say is prevented from being with us to-night to hear our expressions of admiration and to receive our congratulations—has produced an admirable work of art worthy of being placed beside those of his great brethren and predecessors—Holl, Tadema, Sargent, and many others—which hang already upon our walls. We are justly proud of our collection of portraits, and the example we are now adding to their company maintains the splendid standard of achievement which has been set by their painters. I beg you, Sir, to accept this portrait for the Royal Institute of which you are the Head.

Ladies and Gentlemen, though it gave me unmixed pleasure to perform the first part of my duty to-night, I confess that I approach the second part—which is to move a vote of thanks to the President for his services during the two years he has held office—with less satisfaction. "*Surgit amari aliquid*," and our gratitude for past benefits is tempered by our regret at losing the benefactor. We do not, it is true, nowadays put our past Presidents at once upon the dusty shelf of memory, but retain them for a while upon our list of Councillors. But that modesty common to all architects—induced, I apprehend, by continual contemplation of their own creations—and possibly a feeling that after two years as President they have had enough of the Council for the rest of their lives—keep them in the background, and we do not see them very often at our Council Meetings.

My dear Stokes, you and I are here to-night in a very Protean alternation of parts. As a subscriber I ask you as President to accept your own portrait, in order that you may pass it to yourself and to me as members. Then, as President again, you are to receive the thanks which I, as Vice-President, have the honour of proposing, knowing that, as soon as we have played our little comedy to-night, we both make our bow and retire to the ranks of simple members, whence we can criticise the doings of our successors with an agreeable irresponsibility. It is now thirty-four years since our friendship began over our drawing-boards in the Royal Academy Schools. We worked under great men—Street, Shaw, and Waterhouse among them—and were ourselves very great! How easy work was then, and what excellent things we invented; how difficult it is now, and with what doubt we regard its merit! You and I were born in the same year. I have consulted the calendar, and can find no other event of equal importance that year, at any rate to us two. We entered this

Institute in the same year—1882—but, while I had to pass a painful examination, you, if I remember right, were elected upon your merits which were already evident. Thereafter you quite outdistanced me. You beat me for the Pugin Studentship, you became President of the Association, and were elected a member of Council of the Institute while I remained a humble Associate.

The work, Ladies and Gentlemen, which Mr. Stokes has done for this Institute is very great. It is no light duty that a President accepts when he undertakes to carry our flag abroad, and to direct our councils at home. Those who only see him presiding at meetings have little idea of the immense amount of work which lies behind the scenes, and the daily increasing time which has to be devoted to it. Indeed, I sometimes wonder for how long we shall be able to secure in the future the services of such men as we desire for Presidents, in view of the great sacrifice of time we demand of them. Fortunately, public spirit is not lacking among us, and men are still forthcoming to shoulder the burden for the good of their profession. And I suppose no President lays down his office without the private conviction that he has failed in fulfilling the intentions with which he took it up, notwithstanding those occasional successes without which his position would be intolerable. But the failures of honest men are the foundations on which their successors build; and in the course of a pretty long experience of affairs I have never met a man of more pellucid honesty of purpose than the President whose services to his profession I invite you to recognise.

We are able to offer him our congratulations on a brave showing for his two years' command. The membership of the Royal Institute has increased by leaps and bounds. I have lost count even of the number of thousands who own allegiance to our standard. The result of the Town Planning Conference over which he presided was that architects were once and for all recognised by the public as the proper authorities to be consulted in the development of cities. The property of an architect in his artistic conceptions has been placed by Parliament on the same footing as that of painters and sculptors. The new Charter and By-laws have come into operation; a Board of Architectural Education with wide-reaching powers has been set up; and the School of Architecture at Rome which we have worked at for years has become an accomplished fact.

The duties of a President are, as I have said, exacting and laborious; they would be intolerable did he not feel that they were appreciated by those for whom he performs them. Their gratitude is his reward, and I ask you to show your appreciation of the services Mr. Stokes has rendered during his period of office by according him your hearty thanks. (Applause.)

Mr. James S. Gibson [*F.*]:—It is with feelings of very great pleasure that I rise to second the vote of thanks which has been so ably proposed by Mr. Simpson. It is hardly possible for me to say anything further, except that I shall try to voice what is in the heart of every member of this Institute, both young and old, when we tender to the President our most grateful thanks for all that he has done for us during his two years' tenure of office. I am quite sure that there is scarcely a member of the architectural profession who, when he enters our ranks, has any other goal in view than some—shall I say romantic?—illusion that he will one day reach the Presidential Chair. But as he gets older the illusion is not quite so romantic. He sees it clearer and nearer. It is, however, a great satisfaction to all of us, especially to the older members, when we find men of the stamp of Mr. Stokes who, in spite of the disillusioning of these early ideas, take upon themselves the duties of the Presidentship, and carry out those duties as ably as Mr. Stokes has done. Of course, as architects, we are all as poor as the proverbial church mouse. At present no beneficent Chancellor of the Exchequer has fixed a minimum wage for us—we are rich only in gratitude—and out of the richness of that gratitude we tender to our President our best thanks and warmest hopes for his future. (Applause.)

The President, who received a warm ovation on rising, said: My first duty is a comparatively simple one: I have to accept on your behalf the presentation which you have made from yourselves to yourselves (laughter), which includes myself, to myself! I am sorry Mr. Orpen is not here tonight. I am afraid he found me a very difficult subject—or object (laughter)—and he probably would have liked to explain to you how I came to be in that costume. The first time I saw him I asked him what sort of dress he expected me to appear in—whether a dress-suit or a dressing-gown. He replied that a dressing-gown would be just the thing—anything to get rid of the ordinary conventional dress; and he made me stick to the dressing-gown. So, as you see, I appear in it in the portrait. It is a very poetic prophecy of what I shall probably come to as your pauper President of the past. However, there it is, and I have much pleasure in accepting it from you, to you, on your behalf. (Laughter.) With regard to what Mr. Simpson and Mr. Gibson have said, all too kindly, I only wish I could feel that it at all approached the truth, but on these occasions of course flattery is the order of the day, and I take it all in that way. (No, no.) Mr. Simpson said that we always hoped that the next President would build on the failures of the past. I suppose that is all right (laughter), and I sincerely hope Mr. Blomfield will build on my failures and find them a good solid foundation. There are certainly plenty of them; so if they are well grounded in, the superstructure should be a magnificent one. It is a curious thing that every President, when he comes into office, thinks he is going to do such wonderful things, but after a few months he finds

everybody looks upon him as a very average President. And by degrees he comes to think himself that he is hardly up to the average; and when he arrives at the end of the two years he thinks he had better retire into obscurity, and wishes that he had never left it. If it had not been for the conspicuous kindness of members in helping me in the middle of the period when I had a collapse I am afraid I could not have held on; but the Vice-Presidents came forward and did my work, and the others doubtless got on better without me. (No, no.) I thank Mr. Simpson and Mr. Gibson most sincerely for what they said, and I will believe as much of it as I can, but, knowing myself as well as I do, I find it more difficult than do those who do not know me as I know myself!

The President then declared the Session closed, and the Meeting terminated.

Mr. Gilbert Scott's Election to the Fellowship.

Among the announcements at the General Meeting last Monday was one by the President that the Council, in the exercise of the powers given them by Clause 2 of the Supplemental Charter 1909, had elected to the Fellowship of the Institute Mr. Giles Gilbert Scott, architect of Liverpool Cathedral. The President referred to the fact that the new Fellow represented a third generation of distinguished architects, his father being Mr. G. Gilbert Scott, F.S.A., and his grandfather Sir George Gilbert Scott, R.A., a Royal Gold Medallist and Past President of the Institute. Those who had seen the portion erected of Liverpool Cathedral would admit that it was extraordinarily fine, and he felt sure that members would acclaim the feeling of the Council that the Institute would do honour to itself by adding Mr. Gilbert Scott to its ranks.

The Soane Medallion.

The attention of competitors for the Soane Medallion is called to the following modifications in the conditions:—

1. No restriction is placed on the size of the strainers, but they should be of reasonable size.
2. The plans, sections, and elevations to be drawn to 1-16th scale.
3. A section through the front buildings up to and including the rail heads of the lines to be drawn to a scale of 8 feet to an inch.
4. Plans of the upper floors and basement need not be drawn.

Licentiates and the Fellowship.

The second examination of Licentiates desiring to qualify for candidature as Fellows will take place in December next. Applications for admission to the Examination must be sent in on or before the 30th September. Full particulars of the Examination may be obtained on application to the Secretary R.I.B.A.

The Piccadilly Façade.

In the House of Commons on the 20th inst. Mr. Soames asked the Secretary to the Treasury whether the building adjoining the Piccadilly Hotel on the east side, which had been set back, was on Crown land, and if so whether he was aware that a front was being erected which, instead of completing the design of an eminent architect for the elevation to Piccadilly, was of a totally different character, completely discordant with the remainder of the block; whether drawings of that front were submitted to any Government Department and approved by them; whether it was the original intention of the Government that, in the rebuilding of Regent Street Quadrant and the block of Piccadilly east of the hotel, there should be a similarity of treatment of the whole façade; and, if so, why that intention had been abandoned; and whether the Government in future would exercise sufficient control over the buildings erected on Crown land to prevent the recurrence of such an unhappy result.

Mr. Masterman, in reply: The building referred to stands on Crown land held under a lease granted before the hotel was commenced. The Commissioners of Woods have had prolonged negotiations with the various parties concerned, but they are advised that they have no power to prevent the re-erection of the old front. It was the intention that in rebuilding the Quadrant there should be similarity of treatment throughout, but objections have been raised to the original design by trading interests, and the question is now under consideration. No definite design was ever settled for the buildings in Piccadilly east of Nos. 19 and 20. In normal cases the Commissioners have full power to control buildings erected on Crown lands. In this instance there is no new building, but only the re-erection of an old façade removed when part of the former premises were thrown into the street.

Mr. King asked whether the House were to conclude that the beautiful design mentioned would not be carried out.

Mr. Masterman: No; I do not think that conclusion can be drawn from my reply.

The Rebuilding of Regent Street: Regent's Park and Bedford College.

In the House of Commons on the 25th inst. Mr. Fell moved to reduce the vote for the salaries and expenses of His Majesty's Woods and Forests by £100 for the purpose of ascertaining the intentions of the Government with regard to the rebuilding of Regent Street and the Quadrant. They really must have some assurance, he said, that the Government did not intend to rebuild Regent Street in what he would call the Piccadilly Hotel style. The hotel was a splendid building in itself, but was utterly unsuitable for the street. If the street was to be rebuilt, the height of the buildings should be kept within reasonable limits, and everything should be done to retain the light, the colour, and the character of the street.

Mr. Boyton said that since the erection of the Piccadilly Hotel alarm had been felt by the occupying owners of the shops in the Quadrant as to the nature of the buildings in the neighbourhood. It was felt that the railway-arch style of architecture was not suitable for shops. In view of the numerous representations which had been made on the subject, he urged that the Government should reconsider the matter, and if necessary appoint a special committee

and invite assistance with a view to the adoption of a style of architecture suited to the needs of the people whom he had mentioned. When the Crown, as a ground landlord, enforced the building of structures of a monumental character it would be a reasonable concession that a lease for ninety-nine years, instead of eighty years, should be granted. In Regent's Park, as well as in Regent Street, the Department were coming into a large reversion of profit-bearing property. There were in that park a number of detached, old-time villas, and the people of the neighbourhood were anxious that those villas should not be replaced by buildings of an extensive character. There was no desire to quarrel with the good fortune of the Bedford College for Women, which had obtained a good site; but they did not wish other extensive buildings to be erected in the park.

Mr. RUNCIMAN, in reply, said that the question of Regent Street was by no means a new problem. He remembered when he was at the Treasury receiving deputations from some of the shopkeepers complaining of the design which had been made by Mr. Norman Shaw for a large building there. Their complaints were that the windows were too far set back and that the pillars between the windows very much reduced the amount of plate-glass area which was possible in this building. The artistic and the shopkeepers' points of view, he was afraid, frequently clashed. He must confess that, from the point of view of pure art, he saw nothing very admirable in having a whole street, or the whole quadrant of a street, supported entirely on slender brass pillars with great masses of plate glass, but of course the point of view of the shopkeepers was important. They were tenants of the Crown, and, while making for themselves such an income as they might, they were performing an important public function, and the Woods and Forests Commissioners had no desire to erect buildings in Regent Street which would make retail trade there impossible. At the same time they had to consider the beauty of this street, and they took the trouble, as far back, he thought, as 1904, to remit to a small committee the consideration of the new designing of Regent Street. On that committee's recommendation Mr. Norman Shaw was selected for the designing of the large building which was to be the first instalment of the new Quadrant. The building had been put up, but he admitted that it had been the subject of very great criticism in many directions, although the opinions had not all been on one side. There were large numbers of people who admired the building and who did not hold that if it were completed throughout the Quadrant it would destroy the proportions of Regent Street. He did not think it was desirable that the whole of this vast Crown property should be erected on a design which was likely to bring about general displeasure, and he suggested that a good way out of the difficulty would be that they should approve of the Woods and Forests Commissioners making use of a small committee, consisting of those who had an eye to the amenities of Regent Street, and that they should once more consult the tradesmen who would have to occupy these buildings. With regard to some of the specific points that had been raised, experience of the use of Portland stone in London had shown that it made the streets light and not dark; if Portland stone were used throughout Regent Street there was no reason why it should become a dark street. The question of the piers for the support of the superstructures was one of the points that must come under the consideration of the committee which would be set up.

—Turning to Regent's Park, where the erection of Bedford College is causing misgivings in more than one quarter, Mr. Runciman said that the object of the Crown in letting this land to the college was to provide a site for one of the best institutions in London, and to do it in such a way as not to destroy the amenities of Regent's Park. The site was well surrounded by trees, and although the building would tower above some of the trees, he did not know that there was any site in Regent's Park where it would be less conspicuous. Though Bedford College was one of the best institutions in London, he should be sorry to see Regent's Park, or any other park, utilised for the erection of public buildings of this nature. They could ill afford to spare a site even for any of these public institutions, and he thought it was well that it should be publicly stated in the House that there would be no alienation of any park lands in future without the House having the opportunity of expressing an opinion on it.

Lord BALCARRES considered that the appointment of a Departmental Committee to inquire into the new buildings in the Quadrant was not a very hopeful way of producing a satisfactory continuation of that part of Regent Street. If the right hon. gentleman was going to throw his responsibility into the Commission let him do so, but he should delegate it to a Committee always in session to take control of buildings in the process of erection. The right hon. gentleman disclaimed philanthropy, but, in contrast to the action of the Department in other parts of London, he had been very philanthropic in granting an eighty years' lease of eleven acres in the centre of Regent's Park for £950 a year. Such a site might fetch four or five times as much. The right hon. gentleman was putting it on the wrong basis when he said that the college would be a first-class institution. No doubt it would be, but that did not make it less of an eyesore or reduce the loss of the amenities of the Park which it was the duty of the Department to preserve intact. Sixty acres of Regent's Park were in the hands of private individuals. Since the leases were granted eighty years ago a large resident population had sprung up on the north and east of the Park, and when the leases fell in, the Department ought not to increase the number of buildings, but should throw as much land as they could into the Park. If the right hon. gentleman who now shared responsibility with the Office of Works had not sufficient confidence in himself and his official advisers, let him choose an architect of accepted status and reputation and place the responsibility upon that gentleman for a building. Then the right hon. gentleman, if he were attacked in the House, could refer to the acknowledged expert.

Mr. RUNCIMAN: That is exactly what happened with regard to the Quadrant, and we see the result to-day.

Lord A. THYNNE felt that the Department ought to have taken special note of the pledge given by Mr. Hanbury in 1900 that as leases fell in, 1916–30, the question of giving the public access to various parts of Regent's Park should be considered by the House. He objected to private houses and gardens inside Regent's Park, and more strongly to a building such as Bedford College, for it would be more difficult to get rid of a semi-public building like that than to get rid of a private residence. On the Regent Street question the answer given was not satisfactory. When the Quadrant was laid out by Nash and others the height of buildings was considered in proportion to the width of the thoroughfare, and an increase of height should be

accompanied by increase in width. He hoped the proposed committee would include some members who knew trade requirements; but personally he felt that the committee could not now change the type of building. He would be glad to see a permanent committee constituted to deal with the architectural development of London.

Mr. SANDERSON hoped the Department, in view of the strong feeling expressed against the proposed building in Regent's Park, would use influence at least to effect a reduction of the height proposed for Bedford College.

Mr. RUNCIMAN said communication would pass with the college authorities as a result of the discussion; that was all he could say.

Mr. FELL considered the reply of the right hon. gentleman in reference to Regent Street not satisfactory. He would rather trust to the traders interested than to architects.

New Roads for London: The Board of Trade Proposals.

A meeting of the London Society was held at the Royal Society of Arts on Thursday, when there was a debate on Mr. Raffles Davison's paper, "London as it is and as it might be" [JOURNAL, 25th May].

Colonel R. C. HELLARD, C.B., opened the discussion by explaining with diagrams the principles on which the recommendations as to the proposed new roads in the annual reports of the London Traffic Branch of the Board of Trade for 1910 and 1911 were made. In these reports, he said, a general road plan embracing the whole London area was for the first time laid before the public. In every case the ground had been walked over carefully either by himself or Lieutenant Fishbourne, R.E., and he was satisfied that there were at present no very serious engineering difficulties involved along any of the proposed lines, although they might be blocked by new buildings at any moment. He deplored the production of mere paper schemes, the preliminaries of which had not been worked out on the ground. The only real road to success was to get each portion of the general plan accepted in principle by all those interested, and to concentrate attention on it, and secure the co-operation of all concerned. A few years hence, if no such scheme had been adopted, each of the town-planning schemes would have matured independently on local lines, regardless of general requirements. Of the 125 miles of new road suggested, something like 40 miles passed through areas of town-planning schemes now under consideration, while at least another 20 lay across open agricultural ground. Besides these 60 miles of comparatively inexpensive road that might so easily be made, the following portions of the general plan, involving some 23 miles of road, were already under the serious consideration of the authorities concerned—namely, the Brentford by-pass and Cromwell Road extension, the Croydon by-pass, and the Kingston and Surbiton by-pass. Those figures reduced the original mileage to very much more negotiable proportions, and should allay some of the alarm caused by exaggerated estimates of cost. As regarded the improvement of existing main roads, it was of great importance that building lines should be laid down, so that, when leases fell in, advantage might be taken of setting back the frontage to conform to the scheme of widening. This applied particularly to villages, and to such roads as were flanked by forecourts or gardens and by one-storied shops. There were many other points that might be advocated did time permit, such as the reservation of prominent sites for important buildings, the formation of grass verges, and the planting of trees and shrubs, all bearing on the dignity of the approaches to London. The adequate provision for the loading and unloading of vans, clear of the street, might perhaps be insisted on before plans were passed for the erection of new premises where such operations formed a necessary part of the business to be carried on.

University of London: School of Town Planning.

Under the auspices of the University of London Extension Board a summer school for the teaching of town-planning is to be held at the Hampstead Garden suburb from the 3rd to the 17th August. The school has been arranged to meet to some extent the urgent need that exists for the study of the subject by councillors, professional men, and others. It is thought, too, that those actually engaged as assistants in municipal offices or with architects, surveyors, engineers, &c., may, without serious interference with their ordinary work, attend by means of such a school a thorough course of lectures by acknowledged authorities dealing with different branches of the subject. The prospectus states that the Hampstead Garden Suburb has been chosen as the centre because it affords a good opportunity for studying the results of town-planning methods. The lectures will be given at the Institute of the Suburb, and the students will be welcomed at an inaugural reception in the Institute Library on 3rd August by Mrs. S. A. Barnett (Hon. Manager of the Hampstead Garden City Trust) and Sir H. A. Miers (Principal of London University). Lord Crewe (President of the Summer School) will give an inaugural address. The following courses of Lectures have been arranged:—

The Practice of Town Planning: eight lectures and demonstrations by Mr. Raymond Unwin [*F.*];

Town Planning in Foreign Countries and Past Times: four lectures by Professor S. D. Adshead [*F.*];

The Town Planning Act, and other Legal Aspects of the Subject: three lectures by Mr. E. R. Abbott, Clerk to the Ruislip-Northwood Urban District Council;

The Engineering and Surveying Problems of Town Planning: two lectures by Mr. W. R. Davidge [*A.*], and two by Mr. G. L. Pepler, F.S.I.;

The Public Health Aspect of the Town Planning Movement: two lectures by Dr. G. F. McCleary, Medical Officer of Health to the Borough of Hampstead.

The following special lectures have also been arranged:—

The Ethics of Suburb Planning, by Mrs. S. A. Barnett, Hon. Manager to the Hampstead Garden Suburb Trust, Ltd.;

Examples of Garden City Estates, by Mr. Ewart G. Culpin, Secretary of the Garden Cities and Town Planning Association;

The Financial Aspects of Town Planning, by Mr. Henry Vivian, J.P.;

Modern Town Planning in Germany;

Modern Town Planning in America.

Applications for enrolment or for further information should be addressed to the Hon. Secretary, Mr. J. S. Rathbone, The Institute, Hampstead Garden Suburb, N.W.

The Regulation of Advertisements.

The Local Government Committee of the London County Council recommend the Council to make a by-law under the Advertisements Regulation Act 1907, by which no person would be allowed to exhibit any advertisement within 40 yards of 108 open spaces, scheduled by the Committee, in such a way that the advertisement would be seen by any person in such open spaces. The Home Secretary has intimated that he is prepared to approve the by-law, but he questions whether such thoroughfares as Trafalgar Square and Parliament Square can be said to fall properly within the terms of the Act. A second schedule specifies the views from thirty important open spaces which it appears desirable to protect, and in reference to these the Council is asked to approve a by-law that no person shall exhibit any advertisement in such a place and in such a manner as to disfigure the natural beauty of the landscape. Hoardings and similar structures in use at the time of the making of the by-laws are exempt from their operation for five years.

The British School in Egypt: The Season's Work.

The Report of the British School of Archæology in Egypt for 1912 states that the first half of the season's work has been full of interest in its results. An extensive cemetery was found, only thirty-five miles south of Cairo, which dates from the earliest historic age down to the Pyramid period, during the five dynasties 0 to IV. About 600 burials, spread over a mile of desert, have been recorded, and a great number more had anciently been destroyed. This cemetery (known as Tarkhan, from the name of the nearest village) will be one of the standard sources for our knowledge of the early historic civilisation. It is the most northerly settlement known of so early an age, and its discovery thus extends the view of that period which has already been gained by Professor Flinders Petrie's work in the Royal Tombs of the early dynasties and Temple of Abydos. The precise period was ascertained by a tomb with pottery of a pre-Menite king, and another very large tomb with pottery of Narmer-Mena. The presence of so large a cemetery, for the most part before the age of Mena, shows that there must have been a chief town of this period in the region of the present Kafr Ammar. This town preceded the founding of Memphis, and appears to have been begun a few generations earlier than the reign of Mena. It was thus probably started as the northern capital of the dynastic race before Memphis, and gradually fell out of use under the early Pyramid kings. This site consequently shows a stage in the conquest of the land by the kings of Abydos. Some few tombs of the VIth, XIth, and XIIth dynasties are also found, and then the place seems to have been deserted till the XXIIIrd dynasty.

The special feature of the cemetery is the extraordinary preservation of both woodwork and clothing. The earliest linen is firm and fresh, and some large sheets of the XIth dynasty were as white and sweet as if they had just come from the loom. The wooden coffins are, many of them, quite strong and sound, built up of planks of acacia or shittim wood. Sometimes the beams and poles of the tomb-roof were still in place, just as originally built.

Although the Egyptian houses of that early age have all perished in the cultivated plain, yet some precious pieces of house timber were found re-used in the construction of the coffins. These pieces agree with Professor Petrie's explanation of the panelled or recessed decoration in buildings, as copied from timber houses, built of overlapping vertical planks. The planks have rows of tie-holes cut in the edges for lashing them together, so that they could slide one over the other when shrinking or swelling. Some examples were deeply weathered outside and burnt inside, showing that a house had been burnt down and the scraps used as waste for coffin-building. We have thus preserved to us the examples of those wooden forms so generally copied in the early architectural decoration.

Coffins made of basket-work, reeds or withies, were also found. One in specially complete condition had the small leaf-buds of the withies showing ; it was a hamper of large size, and was carried up by hand to the Cairo Museum to ensure its perfect preservation. Other basket-work and matting of various kinds were also found and have been safely removed. Wooden trays, both for domestic use and of large size for biers, were discovered in firm condition. The bed frames were varied in form and often perfectly preserved ; sometimes they even retained the rush-work webbing or decorative plaiting of palm fibre. The poles were beautifully tapered and jointed, usually with carved bulls' legs to support them. There were five or six different patterns of jointing for the corners of the frames. No such furniture has been found in the Royal Tombs, or any other cemeteries of this age.

The second half of the season's work was devoted to the great city sites : Memphis, where the School has worked during four years already, and Heliopolis—the ancient On—where no British work had hitherto been done. The need of working down six feet or more under water obliges these sites to be taken when the water level is low, late in the season.

At Memphis, which was in charge of Mr. Mackay, a gigantic sphinx of alabaster has been found, lying between the two well-known colossi. This

is the largest sphinx that has ever been transported, being twenty-six feet long and fourteen feet high, and weighing about eighty tons. Happily, it has never been defaced, and except for some slight natural fissures the face is as perfect as when carved. It does not bear any name, but belongs either to the XVIIIth dynasty or the best work of the XIXth dynasty, about 1300 B.C. It was thrown over on its side anciently, but it will be set up again this summer, and will remain one of the sights of Memphis like the great Colossus.

Further north, at the north gate of the temple of Ptah, another sphinx has been found, carved in red granite, over eleven feet long and seven feet high, inscribed by Rameses II. The head had been exposed for a long time and is defaced, but the body and base are perfect. Near this was a fine group in red granite, representing Rameses II. and the god Ptah standing. Here the faces are quite perfect, and only a small amount of weathering has occurred on the lower parts. The scale is life size, with large crowns of feathers on the heads, and the work is of the best class of the period. As the whole weighs about nine tons, it will be sent direct to the Ny Carlsberg Museum, Copenhagen, as it is Denmark and not England that provides for the excavation of Memphis; some day, it is to be hoped, museums in England may have spirit for such work. A large figure of a scribe, covered with inscription, but headless, was also found near this group. At the same place, the north gate, deep down, lay a lintel of Amenemhat III., showing that he had built this gateway. This is specially interesting, as Herodotos ascribes the north gate to Mœris, the Greek name of this king. Thus it is seen that Herodotos had correct information about the builders, as he also correctly attributed the western portico and colossi to Rameses.

At Heliopolis, Professor Flinders Petrie and Mr. Engelbach were searching the history of the site preparatory to heavy work in future. The most obvious feature is that the city had been deserted ever since the Persian invasion in 525 B.C. The top surface is dated by the pottery to the sixth century B.C., and there is scarcely a trace of the Ptolemaic, Roman, or Arab ages. The reason for this appears to be that Heliopolis was the key to Memphis, barring the road of an eastern invader. Hence it was for the Persian a mere obstacle, to be destroyed so as not to hinder future access to Memphis.

The temple enclosure was three-quarters of a mile long. It was surrounded by two great walls each forty to fifty feet thick, which have been traced on all sides and planned. This wall was built in the XIXth dynasty. In the north-west corner was a fort, also of massive brickwork; but this could not be traced far, owing to the obstruction of a cemetery and cultivation. The great surprise, however, was finding an earthen fortress of the same type as that at Tell el Yehudiyeh, which Professor Petrie discovered in 1906 and attributed to the Hyksos. This fort at Heliopolis is of the same form, a rounded square, the same size across (quarter of a mile), and has the same thickness of wall—over a hundred feet. It likewise has no gateway in the axis, the walls or bank, where it is opposite to the obelisk, being still twelve feet above the base of the obelisk.

The obstruction of cultivation prevents the search for the sloping gangway over the wall which is seen at Yehudiyeh. By a large block of temple sculpture found under the wall, it must be later than the Old Kingdom; and the XIXth dynasty walls run upon the sides of the square fort. Its age must then be between the VIth and XVIIIth dynasties; and, as no Egyptian would have made such an earthwork, the date is brought to the Hyksos age, or the earlier barbaric invasion. It seems probable that the Hyksos had established their headquarters in the damaged buildings of the XIIth dynasty temple, and thrown up an earth *zaribeh* round it after their wont.

The whole of the results are to be published this year in two volumes. Subscriptions in aid of the important work in which the school is engaged are urgently needed. Subscribers of two guineas and upwards receive the two annual volumes free.

The Annual Exhibition of Antiquities is now being held at University College, Gower Street, and will remain open until the 20th July.

CORRESPONDENCE.

Zinc White *v.* White Lead.

June 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Mr. Jennings' Paper published in the JOURNAL of 11th May, followed in a later issue by Mr. Seth-Smith's letter, must have come as something of a shock to a great number of architects.

The facts stated in Mr. Jennings' Paper, especially the information as to the legislation which foreign governments have found it necessary to pass on this subject, must not be allowed to pass unnoticed. If his facts are not exaggerated, we are faced with the revelation that in specifying lead paints architects are driving thousands of men yearly to disease and many to death.

Apparently the two sides to the controversy are put more or less as follows: On the one side we are told that though zinc paints form a substitute for lead which can be used indoors without any great loss of efficiency, they are quite useless for outside work. While on the other side we are told that the prejudice against zinc paint arises entirely from ignorance and incompetence on the part of painters who have misused it.

When a controversy of this kind comes before

the public eye, it is so easy for individuals to feel shocked and concerned at the state of affairs disclosed, and then, with an assumption of its inevitability, to let the whole matter slip into oblivion, that it is the clear duty of some public body to make a thorough investigation.

The average architect, however humane he may be, wants to specify paints which will so far as possible ensure that his client receives good value for his money. And his duty in this respect is likely to make him unwilling to try experiments with paints which certainly have a bad reputation in some quarters. At the same time he realises that this bad reputation of zinc paints may have been unfairly exploited by those interested in the sale of white lead. In fact, what is required is some really authoritative statement on the subject.

My suggestion is that the Council of the Institute should appoint a small commission to collect evidence on both sides, to sift that evidence, and to report the result in the form of a short pamphlet. A few witnesses on each side might be invited to give evidence, and a printed circular might be issued to all members of the Institute asking them to fill in a form stating their own experience in the matter.—Yours faithfully,

A. H. Moberly [*A.*].

Fireproof or Fire-resisting Buildings?

New York City, U.S.A.: 14*th May* 1912.

To the Editor, Journal R.I.B.A.,—

Sir,—The British Fire Prevention Committee is doing good work in advocating non-combustible materials in our buildings, but I am not sure, having regard to present conditions, whether its work goes far enough, *e.g.* in respect of interior fittings. It is a matter that I believe should be considered not only by architects and owners, but by the public. When the protection of iron and steel, of floors and partitions, has been attended to, there remains the risk by the use of wood for windows, doors, and minor fittings. Ought we and can we eliminate this risk? If we ought to do it, does the economy which is the concomitant of all British outlay on building admit of it?

Though, happily, we do not need to adopt skyscrapers in our great cities, yet we are now erecting larger public and private buildings, some, I believe, comprising as many as a thousand rooms, which if they are not fireproof may become death-traps. It must be admitted that the annual pecuniary loss by fire in the United Kingdom is enormous, and on this ground alone it may be that a greater first outlay in further prevention would be in the long run the cheaper course. The Edgware Road and the Cannon Street and Clapham Junction fires caused attention to be directed to the matter of escapes rather than prevention. This was also the case in the more serious instance of the Triangle Shirt Waist factory in New York City a year ago. Should not the law require something more than subdivision of buildings by cross-walls with fireproof doors for communication, as called for by the Building Act? To external fire-escape stairs, should not windows and interior doors be of metal, or wood covered with metal? Then comes the question of wooden furniture, which brings in yet another element of risk. The concrete furniture which Mr. Edison promises us will not commend itself for our homes, or for luxurious hotels. As to Government buildings with their valuable contents, there is sufficient risk to make the use of steel fittings in desks, cabinets, cases, and shelves, etc., the only safe material, especially now that electricity is in such general use for lighting and other purposes.

The United States are far in advance of us in this matter, and money seems of no object in securing this safety in both public and private buildings. In such great structures as the Prudential, the Metropolitan Life, and other Insurance Companies' Offices, in many banks, and public and private offices, all fittings are of enamelled steel.

As to windows and doors, etc., many buildings in the United States have from two to three thousand copper or bronze-covered windows and as many doors of the same material, or of hollow steel or bronze in each, the total cost of which is £30,000 or £40,000 for the two items.

What British architect could induce a client to pay £5 each for an ordinary room door covered with thin iron plate, or £8 to £12 for one covered with copper or bronze, which are about the rates which obtain over there?

On account of the height, the Fire Department regulations are stringent for new buildings. Notwithstanding this the annual loss is given as about £50,000,000 per annum.

It is becoming general to pull down buildings of twelve stories even, not more than fifteen years old, to replace them with new ones of twenty or twenty-four stories in which the windows are covered with iron, copper, or bronze, and all the doors of hollow steel. Office divisions and fittings of the same metals are added as the floors are let. Asylums, hospitals, hotels, stores, and residences of quite ordinary height are similarly treated, and a lower rate of insurance premium is secured.

The value of this system is shown by the recent instance of the new Vanderbilt Hotel, twenty-two stories high. Soon after its opening, a quantity of furniture packed in inflammable materials which had not been unpacked, caught fire on a middle floor. By closing the steel corridor doors on both sides of the burning mass the fire was confined to a small section of that floor, and beyond blistering the enamel and blackening the walls and ceiling the only loss was the furniture, and the guests above or below were undisturbed, so that no panic or danger such as occurred at the Carlton Hotel in London arose. Had the splendid block of the Equitable Insurance Company's building in Broadway been

similarly fitted, the sad loss of life and enormous money loss could not have arisen. But it was only "fire resisting" and did not resist. The effect has been to send hundreds of tenants into more protected, because more recent, structures.

Yours faithfully,

EDWD. W. HUDSON [*F.*].

P.S.—There is in the Library a record and specifications of some of the work referred to, entitled *The New Era in Building.*

ALLIED SOCIETIES.

The York and Yorkshire Architectural Society.—A General Meeting of this Society was held on the 4th June, when Mr. H. E. Henderson, *Licentiate*, tendered his resignation, which was received with regret. On the proposition of Mr. G. Benson [*A.*], seconded by Mr. A. B. Burleigh [*Licentiate*], Mr. C. M. B. Hinderer was unanimously elected Hon. Secretary. Mr. Henderson is leaving for Nairobi, British East Africa, and a dinner was given in his honour at the Windmill Hotel by members of the Society. Mr. A. B. Burleigh, President, presided, and was supported by some forty members of the Society. During the evening the Chairman presented Mr. Henderson with a suit case, subscribed for by members, and he referred in eulogistic terms to the valuable service he had rendered the Society as Hon. Secretary. They wished him every success in his future career, and assured him that they would always retain happy recollections of their association with him. Mr. Henderson, in a feeling reply, thanked the members for their hospitality and for their splendid gift. In the new sphere to which he was going he should always look back with pleasure to the pleasant days he had spent in York and the many friends he had left behind.

Cape Institute of Architects.—The Annual Meeting was held in Cape Town on the 18th April, Mr. Arthur H. Reid [*F.*], *President*, in the Chair. The following officers were elected for the ensuing year: *President*, Arthur H. Reid [*F.*]; *Vice-President*, John Parker [*F.*]; *Members of Council*, W. J. Delbridge [*A.*], F. K. Kendall [*A.*], Alex. Forsyth, C. H. Smith [*A.*], J. Morris [*Licentiate*], F. R. E. Sladdin; *Hon. Secretary and Treasurer*, E. Austin Cooke. The Council's Annual Report, referring to the question of Architects' Registration, stated that in December 1910 a Conference was held in Cape Town under the auspices of the Cape Institute, with the idea of federating the three Institutes of the Transvaal, Natal, and the Cape; but it was decided that, instead of federating, all should unite in endeavouring to get an Act on the lines of the Transvaal Registration Act passed for the whole Union. A Committee was appointed, and had drawn up a Bill, copies of which had been sent to the societies interested. A considerable amount of correspondence had passed between the Council and the various bodies interested, each offering amendments, and those proposed by the Society of Architects were now being considered by the Transvaal and Natal Institutes.—The Report having been adopted, Mr. Reid delivered his Presidential Address, which dealt at considerable length with the vexed question of architectural competitions in South Africa. The only panacea for the evil, he said, was loyal, unselfish combination to fight it. The remedy was entirely in their own hands, and the first step would be the statutory control of practising architects by a Legislative Registration Act. All but the constructive professions were under the authority of licensed Executive Boards or Departments; but architects, who had the spending power, the health, and comfort of the nation in their hands, were a more or less disorganised body. Touching the subject of Town Planning, Mr. Reid said that the sub-committee appointed by the Cape Institute to assist and advise the Cape Peninsula Publicity Association had done all that had been required of it, but the municipal authorities did not seem to appreciate the value of the Council's advice regarding the artistic possibilities of the foreshore and public gardens. They could only watch the trend of public opinion until the unification of Cape Town and the suburbs was an accomplished fact, and then take steps to make their influence felt. They must, when the right time came, press home the fact that mere building construction and sanitation could be supervised under Statutory Acts and Regulations, by engineering departments and their building inspectors, but the highest architectural, hygienic, and artistic advice was required in problems of collective architecture, street planning, the subdivision of estates before they were sold, and the maintenance and restoration of old buildings that possessed any antiquarian or architectural interest.

MINUTES. XVI.

At the Sixteenth General Meeting (Ordinary) of the Session 1911-12, held Monday, 24th June 1912, at 8 p.m.—Present: Mr. Leonard Stokes, *President*, in the Chair; 28 Fellows (including 12 members of the Council), 27 Associates (including 1 member of the Council), 2 Honorary Associates, 6 Licentiates, and numerous visitors—the Minutes of the Meeting held 10th June 1912, having been published in the JOURNAL, were taken as read and signed as correct.

Mr. E. Guy Dawber, *Vice-President*, in the absence of the Hon. Secretary, announced the decease of Lewis Angell, elected *Fellow* 1864, placed on the List of *Retired Fellows* in 1902; Edmund John Milner Allen, *Associate*, elected 1882; William Edmund Wallis, *Associate*, elected 1882; Albert Edward Twells, *Licentiate*.

The President announced that the Council, acting under the powers given them by Clause 2 of the Supplemental Charter 1909, had elected to the Fellowship of the Royal Institute Mr. George Gilbert Scott, architect of Liverpool Cathedral.

The following Members and Licentiates attending for the first time since their election were formally admitted by the President—viz.: James Ragg Wigfull and Allan Murray Campbell Young, *Associates*, Henry Langton Beckwith and Harry Milne, *Licentiates*.

The President delivered an Address on the Presentation of the Royal Gold Medal for Architecture to Mr. Basil Champneys, B.A. Cantab.

Mr. Champneys, having been invested with the Medal, addressed the Meeting in reply.

Mr. John W. Simpson, *Vice-President*, unveiled and presented to the Institute on behalf of the subscribers the portrait of the President, Mr. Leonard Stokes, painted by Mr. William Orpen, A.R.A.

On the motion of Mr. Simpson, seconded by Mr. James S. Gibson [*F.*], a vote of thanks was passed by acclamation to the outgoing President, Mr. Leonard Stokes, for the invaluable service he had rendered to the Institute during his occupancy of the Presidential Chair.

The President having formally accepted the portrait on behalf of the Institute and acknowledged the vote of thanks, the proceedings closed, and the Meeting separated at 9.30 p.m.

f Architectural Library

Salisbury Cathedral. (From an old Engraving.)

CONSTRUCTION AND DESIGN.

By Sir Charles A. Nicholson, Bart., M.A.Oxon. [*F.*].

Read before the Manchester Society of Architects, 10th January 1912.

If we define architecture as the art of building beautifully, it follows that good construction and good design are equally necessary elements of our art, and therefore it is worth while to turn our attention at times to well-known buildings in which the union of these two elements can readily be followed. I propose on this occasion to speak mainly of Gothic work, because Gothic buildings are usually more complex than those of the ancient styles, and therefore they provide more suitable illustrations for our present purpose.

The construction of many large Norman churches was a somewhat leisurely affair: when the quires were finished and roofed in, the naves were often built bay by bay, and probably work was suspended during the winter months, so that sometimes a century or more had passed before the complete scheme was realised. This was the case at Peterborough.

Now, it is obvious that in such cases it would be difficult and costly to plan the building on a developed system of thrust and counter-thrust; each bay had to be more or less self-supporting and structurally independent of adjacent work. Norman construction, being practically monolithic in idea, lent itself readily to this gradual method of building, whereas in a Gothic structure like Westminster Abbey it was necessary to provide strong temporary abutments if only a part of the church was completed.

A very interesting book on the fabric rolls of Westminster by the Rev. R. B. Rackham, of

Mirfield, tells us of the construction of the nave of that church. The work took a century to complete. It was constructed not bay by bay like a Norman church, but systematically from the floor upwards, the vaulting being deferred till after the completion of the outer roof and the flying buttresses. A similar procedure was followed at King's College, Cambridge. On the other hand, we may consider Wykeham's remodelling of the nave of Winchester: here the Norman work was cut out and recased one bay at a time without any apparent difficulty, in spite of the well-known defects of the foundations.

The massive Norman buildings of coarse concrete were evidently not specially endangered by thrusts; their weakness lay rather in the nature of the material often (but not always) used. When the mortar was bad, there was a danger of the great superincumbent weights bursting the supporting piers, these being mere casings of ashlar, often carelessly packed with a concrete which is little better than dry rubble. Hence the collapse of the Norman towers at Winchester, Ely, Chichester, and many other great churches. The special weakness of a developed Gothic structure such as the quire of Beauvais is of a different nature, the supports being generally compact and strong enough for their loads, but maintained in a precarious state of equilibrium which approaches instability.

English builders have seldom attempted these daring feats of construction in masonry, but they were early in the field as pioneers of the new systems of construction. Thus the high vaults at Durham are of advanced character considering their early date. In the quire they are abutted by round arches thrown across the triforia, but in the nave the thrusts are transmitted by regular flying buttresses underneath the triforium roofs, a construction very much lighter than that of the quire. Moreover, the Durham nave vaults are of pointed section, a form which was clearly adopted for constructive reasons in this instance.

An equally interesting example of early English Gothic building is to be found in the Cathedral of Wells. The work here appears to be of purely English invention, owing scarcely anything to foreign models, and is totally different from the very French design of the quire of Canterbury, or from the Anglicised versions of the Canterbury work which we find at Lincoln and Rochester. The central portions of Wells Cathedral, including the western arches of the quire, the transepts, and about half the nave, were the work of Bishop Reginald FitzJocelyn (1174-1191), and there is every reason to believe that the existing vaults were planned, if not actually built, by the original builders of the church. If we examine the work we shall find a very solid, massive building with thick walls and a passage round the clerestory. The buttresses are of slight projection, and there are flying buttresses consisting of a little more than half of a pointed arch underneath the triforium roof. The vaults are of unusually acute form and rest on corbels and very short shafts, except in the aisles and north porch, where the shafts rise from the pavement. These vaults are so steep that their thrust must be very slight. The clerestory wall has flat buttresses built upon the triforium cross arches, and it would appear that the latter were designed not so much as a means of transmitting the thrust of the nave vault to the external buttresses, as in order to provide a support for the clerestory buttress and for the purlins of the aisle roofs. At Wells, as at St. Cross, we have a vaulted church constructed with thick walls and in no way resembling the skeleton system of construction which was being developed abroad. So the design of Wells is, with logical correctness, very different from that of contemporary French churches. It is clearly a walled church, the vaulting is obviously carried on corbels, the bays are not divided by shafts, the windows do not fill the vault cells, the ground stage and the triforium are treated as unbroken arcades.

At Salisbury the cross section closely resembles that of Wells, and, although the triforium arcade is divided into distinct bays, the interior is divided into three distinct stories and the vaulting shafts are only carried half-way down the triforium. The expression of such churches is totally different from contemporary French buildings in which the flying buttresses are

exposed above the triforium roofs and the internal elevation is cut up into narrow bays by vaulting shafts rising more or less continuously from the pavement. At this period, at any rate, the English were builders of walls, and the French builders of piers and buttresses. The French masons, possessed with the idea of expressing their arched construction in the details of their buildings, adopted the practice of setting their square bases and capitals at varying angles according to the plan of the ribs they were intended to carry. Sometimes, as in the charming little church of Nouvion-le-Vineux, near Laon, it is possible to recognise changes of mind on the part of the builders, owing to the superstructure no longer agreeing with the planning of the column bases. But these mannerisms were not very consistently followed in developed French Gothic work, although they reappear in late Flamboyant buildings.

While Durham was unfinished and when the work at Wells had been begun, William of Sens commenced the present quire at Canterbury upon French lines, and succeeded in getting the work carried out with French detail. The construction here is a modification of that of Sens Cathedral: the flying buttresses are exposed, but crawl timidly up outside the triforium roofs, and certain English characteristics appear in the use of triforia open to the church.

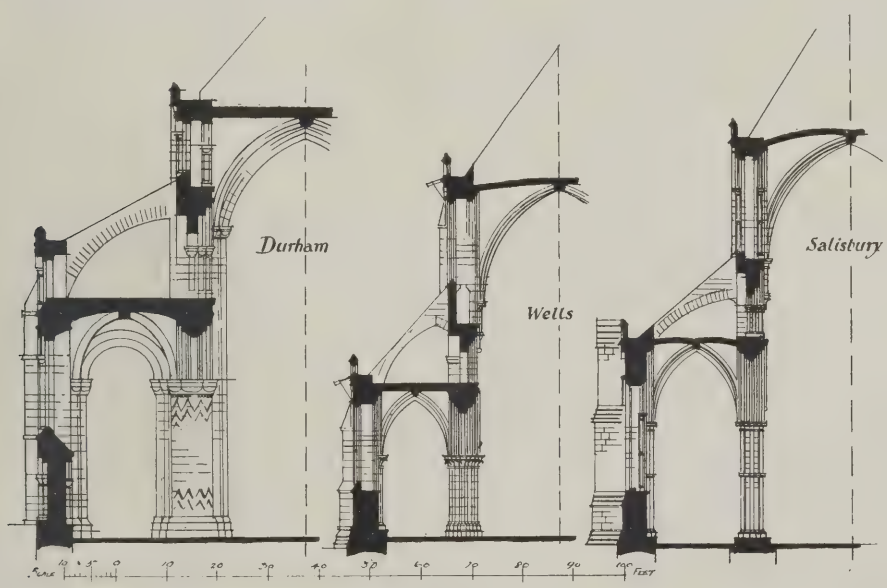


Fig. 1.

The decoration by means of marble shafting seems to have been the great novelty introduced at Canterbury, and we find this soon afterwards used with greater profusion at Lincoln and Rochester and Chichester. In St. Hugh's quire at Lincoln we see the Canterbury design repeated in its chief elements, but the details here are generally English. Subsequently at Westminster, although the plan and the constructive system are undoubtedly derived from such churches as Rheims, the execution of the work is again English. The plan of the apse differs from any known Continental examples, while the method adopted for filling in the vault cells, the ridge rib used in the high vaults, the triforium with its timber roof open to the church, and certain peculiarities in the construction of some of the flying buttresses, show that the church is a native rendering of a foreign conception.

Such acute vaults as those at Wells are exceptional, the common practice in France, Normandy, and those parts of England which were in touch directly or indirectly with Continental influences being to turn the diagonal groin ribs semicircular, the pointed transverse ribs being of the same radius and the wall ribs stilted. At Kirkwall Cathedral in Orkney,

however, the vaults appear as acute as those of Wells, and no special abutment is provided beyond great thickness of wall. The flatter vaults of the Continental type, however, were found to require a complicated system of external abutment, and in France especially, where the churches are wider and loftier than most of our English examples, buttress design assumes paramount importance. At Paris and Laon, where the naves are flanked by two-storied aisles, the buttressing was fairly simple in idea, and for some time French and Norman builders seem to have doubted the safety of balancing their vaulted clerestories upon tall, isolated columns. Thus at Rouen and Eu, though the two stories of the aisle were thrown into one, the arches opening into the nave were nevertheless constructed in two tiers. And there is a curious recurrence of the same idea in the Renaissance church of St. Etienne du Mont at Paris. It is possible that such strainer arches were first constructed as a concession to the prejudices of people who were accustomed to churches with galleried aisles, but it is equally likely that the lower arches were intended to assist in maintaining a row of tall pillars in equilibrium.

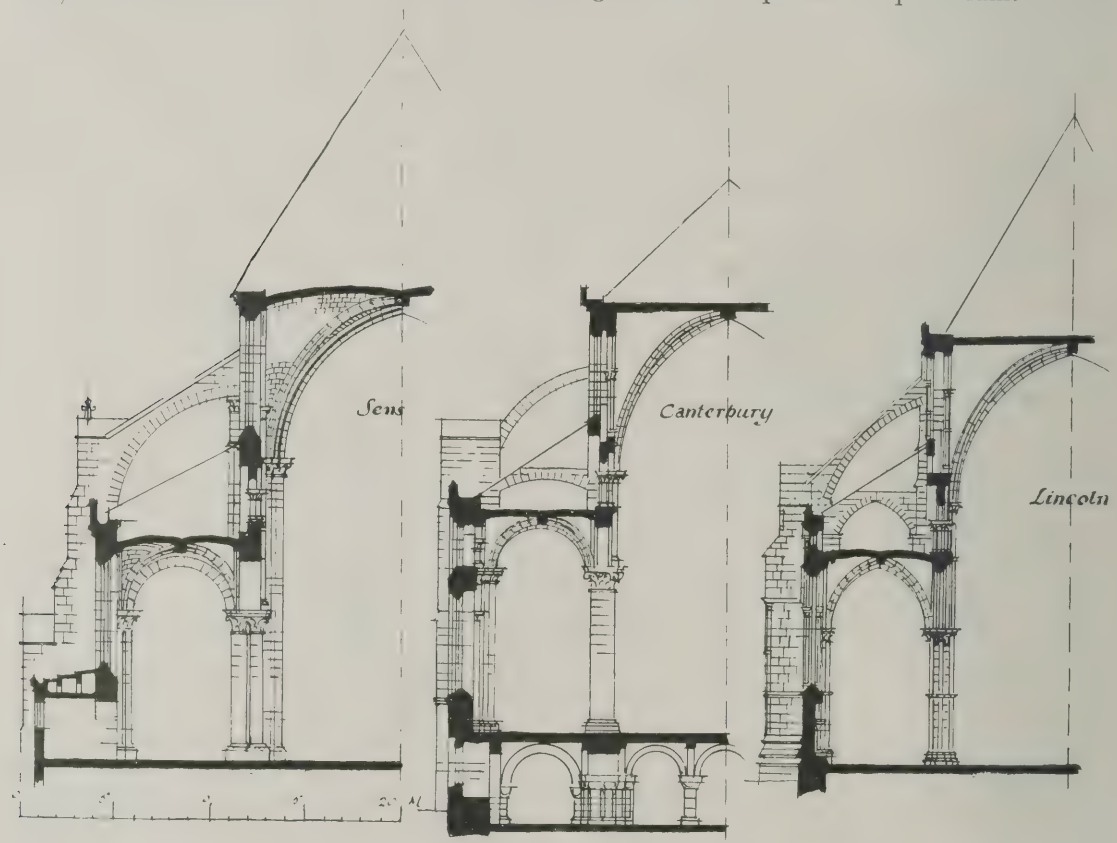


Fig. 2.

Be this as it may, the earlier Gothic churches with tall aisles are generally very massive, as is the case at Bourges and Chartres. In the latter church the size of the stones and the solidity of the vaults and buttresses are prodigious. Here, however, the builders seem to have committed an error of judgment in pitching their flying buttresses a little too low on the clerestory wall, for about a century after the completion of the high vaults certain settlements occurred which made it necessary to add an upper tier of flying buttresses above the original ones. The position and the comparatively slight construction of the latter lead one to the conclusion that the movement they were designed to arrest was due, not to any failure of the actual abutments of the vaults, but rather to some cause connected with the external timber

roof, the weight of which must have been very great. (This roof was burnt early in the nineteenth century, and the present covering is a slight iron framework covered with copper.) At Rheims the cathedral was begun in a very substantial fashion with thick walls and pillars, but above the level of the main arches the character of the work changes, and the superstructure is much slighter than was originally intended. The vaults here are steeper than the

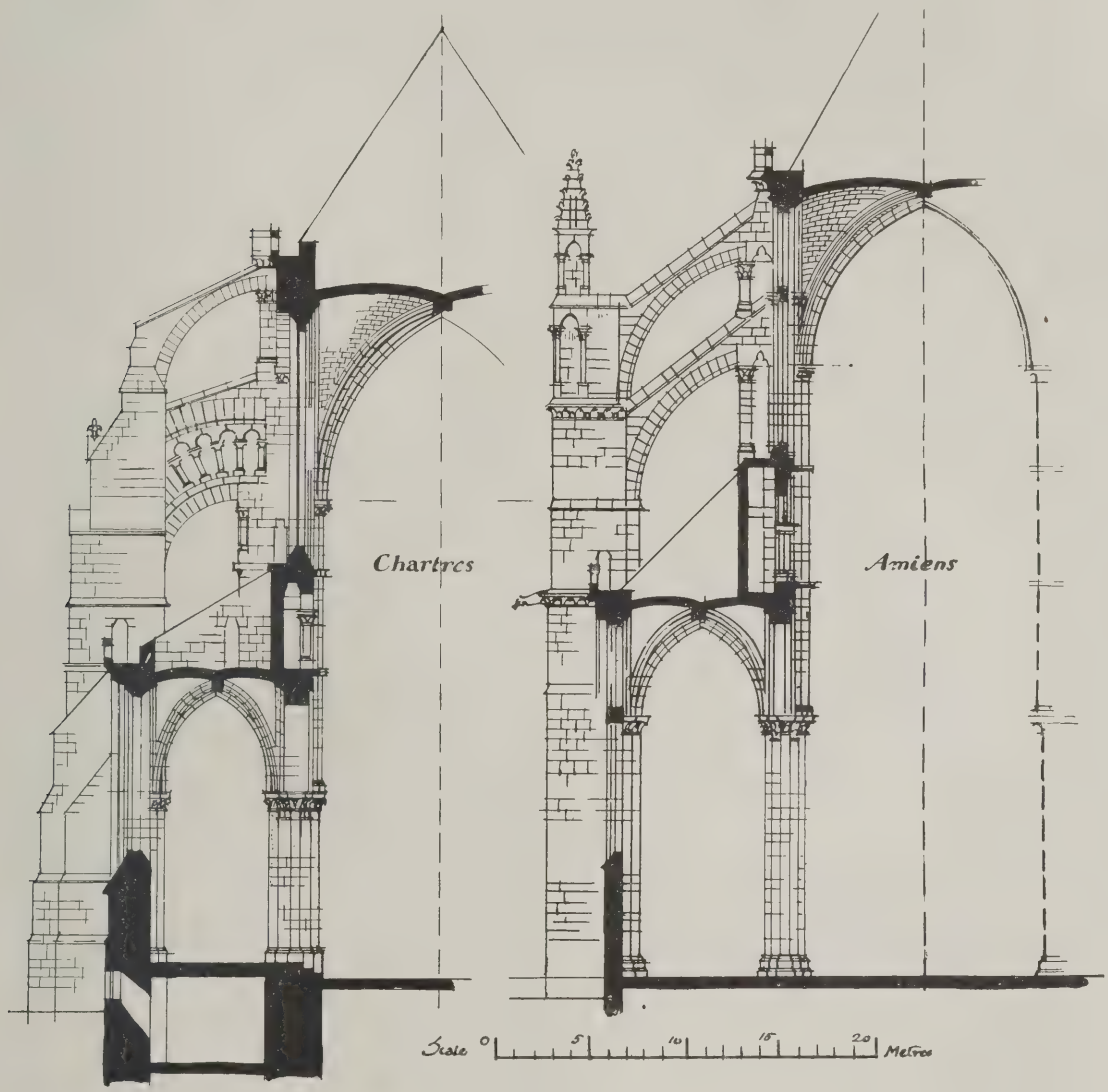


Fig. 3.

usual French pattern, and the flying buttresses, which are double and of unusually effective design, have proved adequate for their purpose, though a few years ago they were rebuilt on account of the natural decay of the stonework.

Amiens nave was completed without departure from the original design, and the construction is lighter than at Rheims. On the whole this nave may be taken as the monument in which the ideals of French Gothic are most nearly attained. The proportions are perfect, and the general design as well as the details possess a boldness and grandeur which is found in few other buildings of any period or locality. Unless we accept the new Transatlantic theories that mediæval churches were built crooked on purpose, we must admit that extensive move-

ments have taken place at Amiens since its first completion, and it is known that metal ties were inserted about a century after the nave was built; but these French Gothic structures were of so elastic a nature that very considerable movements could take place without serious cracks occurring, and this is the case here. At Beauvais it was different. The construction is much lighter than at Amiens, and corbelling is freely used with the intention of minimising the thrusts by so poising the abutments as to have a tendency to fall inwards. Unluckily the materials used were not sufficiently strong; crushing and fractures occurred, and the whole quire had to be strengthened by dividing each of the original bays into two. However, the

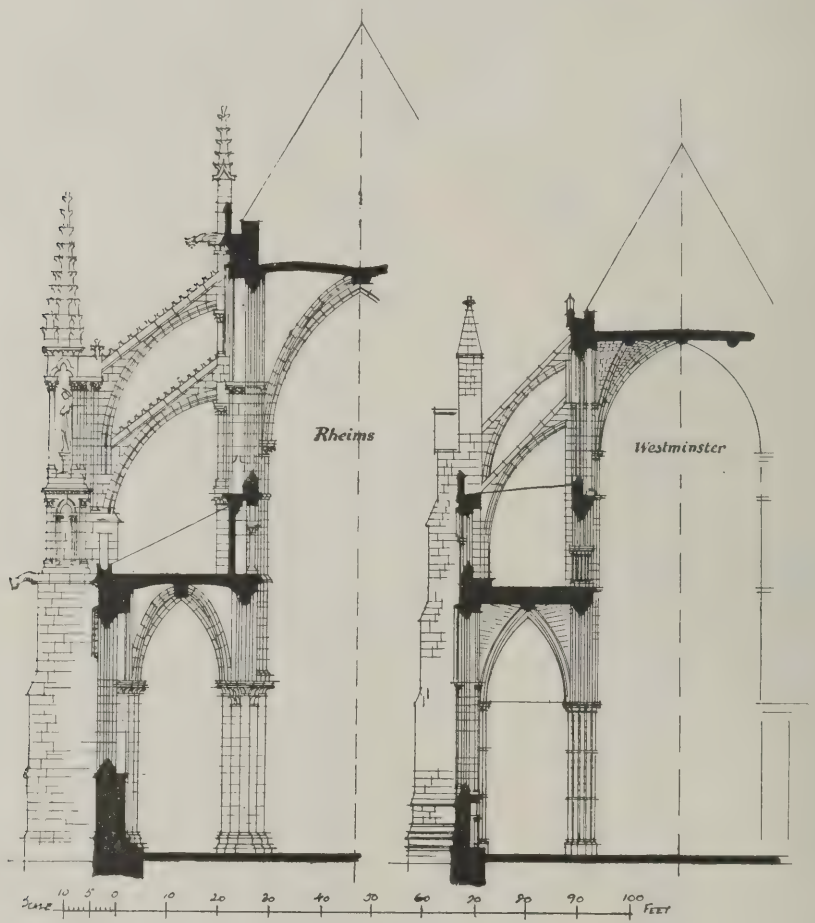


FIG. 4.

effect is probably a good deal finer than would have been that of the original design, chiefly on account of the narrowness of the arches as compared with the height of the pillars. The design of the apse remains as originally planned, and is in some respects superior to that of any other of the great French chevets; internally there are four concentric rings of windows —in the chapels, the ambulatory, the triforium, and the clerestory; the chapel windows are small two-light ones, those of the ambulatory very broad and low, and those of the clerestory very tall and narrow. Outside, the flying buttresses rise sheer from the ground, and the chapels are unusually low and compact, thus avoiding the confused appearance of the chevets at Amiens or Le Mans, in which the main apse is masked by a ring of chapels of exaggerated height and depth.

Such devices as the corbelling out of the upper parts of abutments in order to increase

their resistance to the thrusts of the flying buttresses were not generally adopted in England, though at Lincoln the arches crossing the triforium are carried on corbelling above the capitals of the piers very much in the same way as the clerestory buttresses of a French church. But as a rule the English builders avoided false bearings and difficult pieces of construction. A rare exception to this rule is seen in the fourteenth-century Presbytery at Wells. Here the columns are very slight and the vault is practically a barrel one with steep flying buttresses. Beyond the end of the quire is a double procession path, and beyond that again the octagonal Lady chapel, which is roofed with a dome overlaid with ribs and bosses to give the effect of an octagonal vault. Now the great east window of the quire is flanked by two flying buttresses, the bases of which are supported on two of the slender columns of the procession path. These columns carry first the springers of the procession path vault, above which is a series of corbelled-out courses of masonry brought forward in a westerly direction to meet the springers of the two flying buttresses referred to. This is to all appearance a most daring piece of stone construction, but it appears to be perfectly stable, for, though there are evidences that the clerestory of the Presbytery has settled slightly in an easterly direction, the columns which carry these flying buttresses are practically plumb and the vaults of the procession path are not cracked.

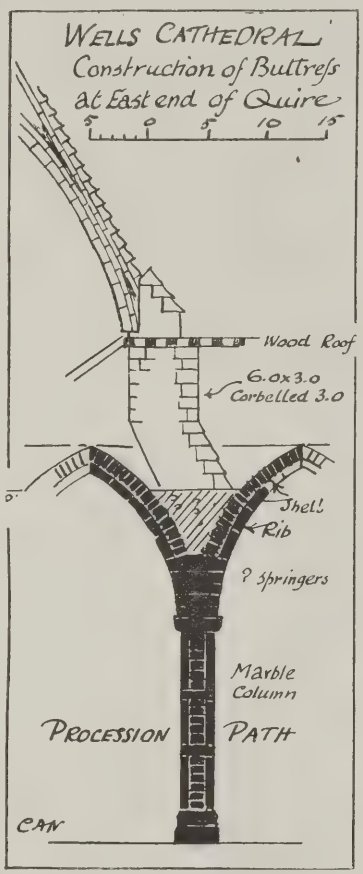


Fig. 5.

The Somersetshire masons in the fourteenth century must have been great engineers and excellent artists, as we may see from the method they adopted in dealing with the central tower at Wells. The church originally had a low lantern over the crossing, which was apparently not finished till the time of Bishop Jocelyn, who completed the western part of the nave and built the west front. Upon this base an enormous superstructure was raised in the fourteenth century, evidently forming a huge lantern opening into the church and lighted by six long coupled lancets on each face. There are staircases at each corner ending in pinnacles with stone roofs of the same character as the work in the Chapter House, and there is evidence that a timber spire was intended, if not built. Though the walls of this upper stage were built in two thicknesses tied together with isolated bond stones and with iron ties in both skins of the walls, the weight was sufficient to cause the whole substructure to sink. This was remedied partly by strengthening the adjacent arches of the nave and transepts, and partly by constructing a solid rood screen in the eastern opening and the well-known strainer arches on the other three sides of the tower. The effect of these is quite unique, and mechanically they have proved more than adequate for their purpose; that this is the case is shown by the fact that the weight of the superstructure has been greatly increased since their construction with no apparent ill effect. For, first of all, owing probably to the fact that the vast windows of the lantern made the church unbearably cold in winter, these windows were filled up with almost solid tracery work, scribed to the older masonry in a curious fashion. Then the spire was taken down, or the idea of its construction was definitely abandoned, and a series of traceried parapets was added, with eight statues in tabernacles and twenty subsidiary pinnacles; and lastly it was determined to shut out the whole lantern from

the church, and a heavy fan vault was constructed underneath it at the level of the four great arches of the crossing.

As we have already observed, the vaults of the eastern part of Wells Cathedral are mostly of barrel or domical construction with ribs for ornament only, and I believe the quire vault of Gloucester is similar to the Wells vaults in this respect. In the south quire aisle at Wells a

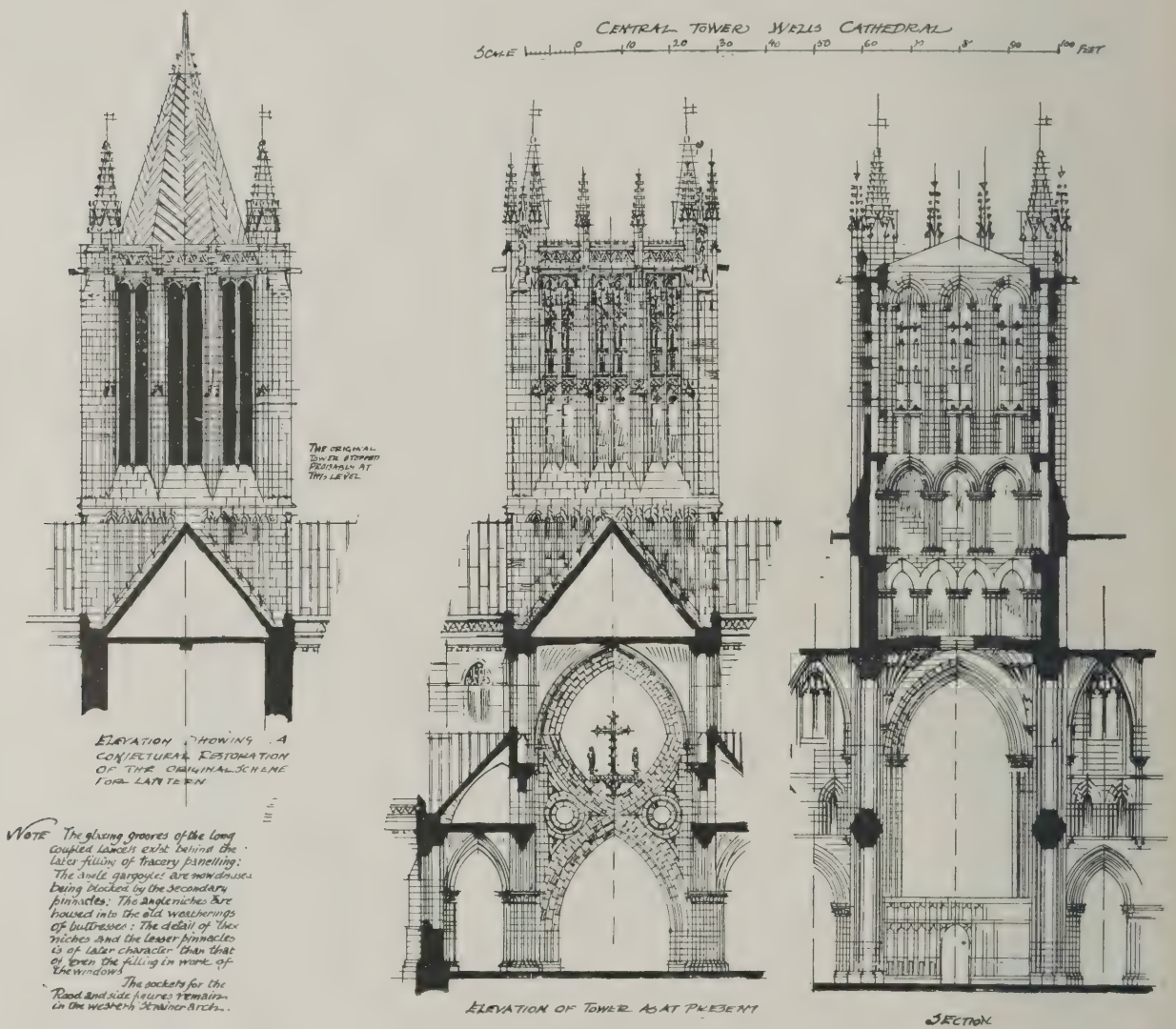

CENTRAL TOWER WELLS CATHEDRAL
SCALE 0 10 20 30 40 50 60 70 80 90 100 FEET
THE ORIGINAL TOWER STOPPED FLUSH WITH THIS LEVEL
ELEVATION SHOWING A CONJECTURAL RESTORATION OF THE ORIGINAL SCHEME FOR A LANTERN
NOTE The glazing grooves of the long coupled lancets exist behind the later filling of tracery panelling: The Angle gargoyles are now disused being blocked by the secondary pinnacles: The Angle niches are housed into the old weatherings of buttresses: The detail of the niches and the lesser pinnacles is of later character than that of even the filling in work of the windows
The sockets for the Rood and side beams remain in the westerly Strainer Arches.
ELEVATION OF TOWER AS AT PRESENT
SECTION

FIG. 6.

piece of the rib work has given way and been bolted up to the shell of the vaulting, showing that in this part of the church at any rate the construction is independent of the rib work.

In the earliest Gothic vaults each rib was an independent arch from the capital of the vaulting shaft up to the apex of the vault, and consequently no specially difficult stone cutting was required. But this system necessitated the use of very large capitals or corbels at the springing of the vault, and it was soon seen that the ribs ought to be made to interpenetrate. With arches of varying curves the working of the lowest courses of the springers would have been a very complex matter unless (as may sometimes have been the case) these were built

in block and worked down by eye after the upper part of the ribs had been set. Accordingly, when the ribs were made to interpenetrate, it was usual to strike them all with the same radius so that they started in orderly and symmetrical bundles from the tops of the vaulting shafts. But by this method the ribs, being of different lengths, attained different heights. As it was generally desirable to keep the vault ridges approximately level in order to keep the windows high and yet to have tie beams to the outer roof, the French masons and some of the early English ones were accustomed to stilt their wall ribs (on the short side of an oblong bay), not starting this rib until the level of the solid springers had been passed. Thus in working these springers they had only to consider the three similar curves of the cross and two groin ribs, the wall rib being vertical instead of curved at this level.

The French builders filled in their vaults with slightly diminishing courses parallel to the ridges; but the English plan was to use courses of practically uniform width, thus leaving a chevron joint at the ridge, and ridge ribs were introduced at an early period in order to cover this joint. At first these ridge ribs were slightly arched from bay to bay, but before the end of the thirteenth century it became customary to introduce branch ribs between the cross ribs and the diagonals in order to give intermediate support to the ridge rib. This could then be constructed straight instead of undulating; but this involved the use of compound curves in setting out the ribs, in order that they might all be of the same radius up to the level of the top of the springers and yet all attain the same level in spite of the difference in their spans. Thus the advantages of using arches of different "pitch" were obtained while the difficulties were avoided, because wherever any portions of two or more ribs had to be worked out of one piece of stone the same curve applied to both ribs. Branch vaults with ribs of compound curve are used as early as the thirteenth century at Ely, and it was soon seen that when the branches were multiplied the vault panels became so narrow that they could be closed by long flat stones instead of with arched courses of small masonry, as had been necessary in the wider spaces left between the ribs of the earlier vaults, the form of which was adhered to by the French builders right up to the Renaissance period. These simple vaults possessed much elasticity, but the English system with its network of ribs and well-fitted panels soon lost this quality.

In due time fan vaulting was evolved, a system of finely jointed masonry in which ribs are unnecessary except to give stiffness combined with lightness. In the construction of vault fans a uniform curve is essential to avoid hopeless confusion. It is quite possible to use a simple arc of a circle for this curve, but this involves a considerable amount of undulation in the ridge where the fans intersect, and, especially when the vault bays are oblong, it follows that the intersections of the fans with the wall are very considerably lower than the centre of the vault. In Gloucester cloisters, where a simple arc is used for the fans and the vault bays are square, the fans stop at the level of their point of intersection, leaving a diamond-shaped space in each bay, which is covered with a flat stone ceiling. This would be impossible to construct in masonry in the case of a large vault, and if the vault were in oblong bays the difficulty would be greatly increased, as the fans, if constructed as at Gloucester, would not reach to the main axis of the vault. Therefore in a consistent fan vault the whole of the ceiling must rise in concentric courses until these intersect on the ridge lines. Now, as has been pointed out, it was desired to keep the ridges as nearly as possible level so as to keep the windows as high and the outer roof as low as possible, and, as all the lines of a fan vault must necessarily be portions of the same curve, a considerable amount of doming was inevitable if the curve were a simple one struck from the springing level. But by using a curve struck from two or more centres it was possible to obtain a depressed template which could be applied throughout the vault. Thus, as the fans spread out further and further from the springers,

their rise became more and more gradual, and consequently the ridges could be made to all intents and purposes level.

English builders, having become accustomed to these compound curves, came in time to use them freely wherever expedient, but the form of the four-centred arch was made use of in their branch vaulting even before the end of the thirteenth century.

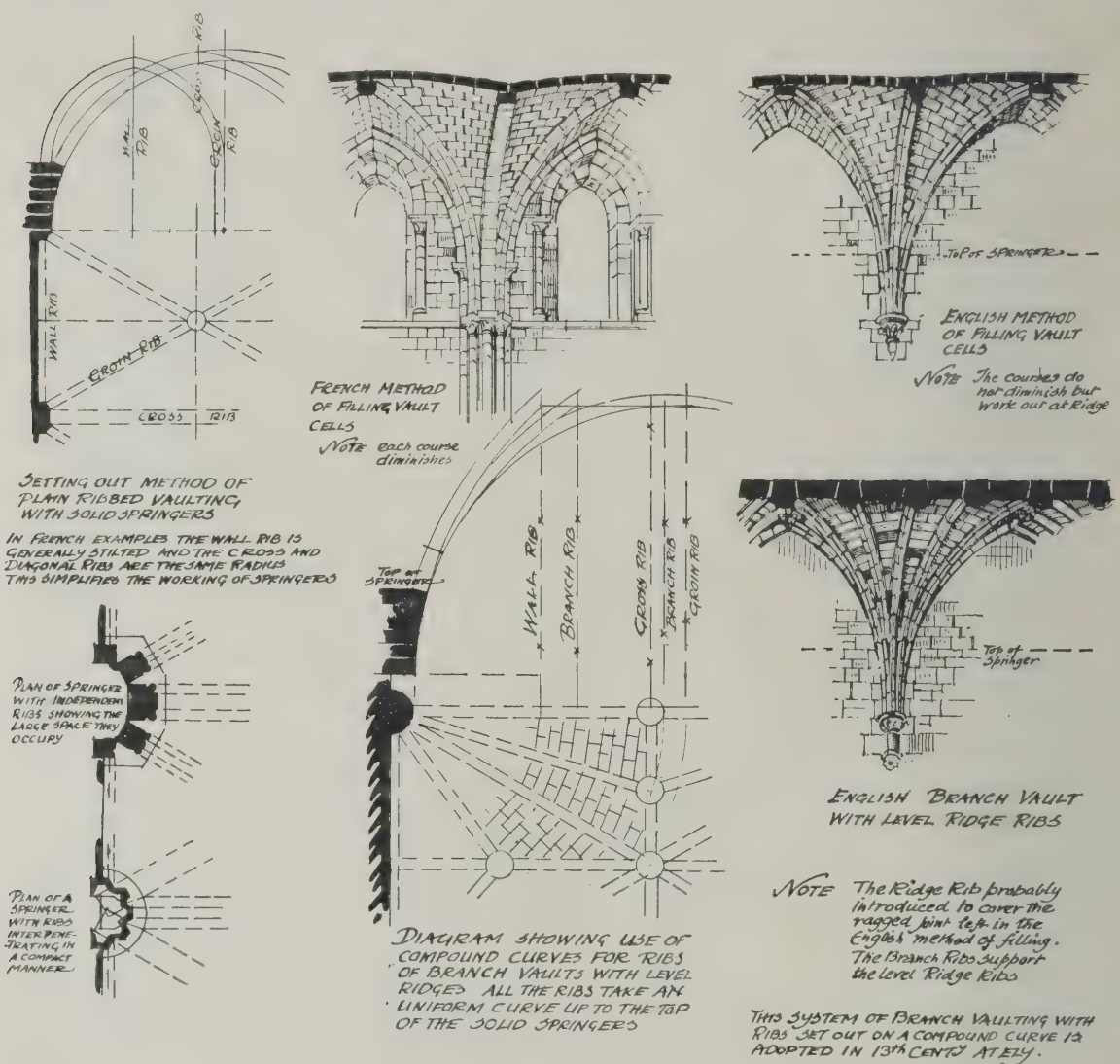

WALL RIB
CROSS RIB
GROIN RIB
SETTING OUT METHOD OF PLAIN RIBBED VAULTING WITH SOLID SPRINGERS
IN FRENCH EXAMPLES THE WALL RIB IS GENERALLY STILTED AND THE CROSS AND DIAGONAL RIBS ARE THE SAME RADIUS THIS SIMPLIFIES THE WORKING OF SPRINGERS
PLAN OF SPRINGER WITH INDEPENDENT RIBS SHOWING THE LARGE SPACE THEY OCCUPY
PLAN OF A SPRINGER WITH RIBS INTERPENETRATING IN A COMPACT MANNER
FRENCH METHOD OF FILLING VAULT CELLS
NOTE each course diminishes
Top of Springers
ENGLISH METHOD OF FILLING VAULT CELLS
NOTE The courses do not diminish but work out at Ridge
WALL RIB
BRANCH RIB
CROSS RIB
BRANCH RIB
GROIN RIB
DIAGRAM SHOWING USE OF COMPOUND CURVES FOR RIBS OF BRANCH VAULTS WITH LEVEL RIDGES ALL THE RIBS TAKE AN UNIFORM CURVE UP TO THE TOP OF THE SOLID SPRINGERS
Top of Springer
ENGLISH BRANCH VAULT WITH LEVEL RIDGE RIBS
NOTE The Ridge Rib probably introduced to cover the ragged joint left in the English method of filling. The Branch Ribs support the level Ridge Ribs
THIS SYSTEM OF BRANCH VAULTING WITH RIBS SET OUT ON A COMPOUND CURVE IS ADOPTED IN 13th CENTY AT ELY.

FIG. 7.

We have now briefly considered the native developments of structure in Durham, Wells, and Salisbury, with their thick walls and flying buttresses, and the lighter and more daring work at Sens, Canterbury, and Lincoln; we have glanced at some of the great achievements of the French school of builders, and at the Abbey at Westminster which owes many of its characteristics to these models, but we find our later architecture quite different in structure from any of these. The vaults can no longer be regarded as semi-elastic constructions able to give with any movement of the building, but are composed sometimes of a close network of ribs braced with lesser ribs and with the rigid filling of the intervening panels, or else are

composed of thin shells of finely wrought stonework depending for its stability on the rigidity of the supporting piers and buttresses. The latter are constructed of carefully wrought ashlar work, and the arch stones are used in as long pieces as possible. In this method of building there was less tendency for the vaults and arches to settle in themselves than in the less rigid and more delicately balanced buildings of the French school of the thirteenth century, but at

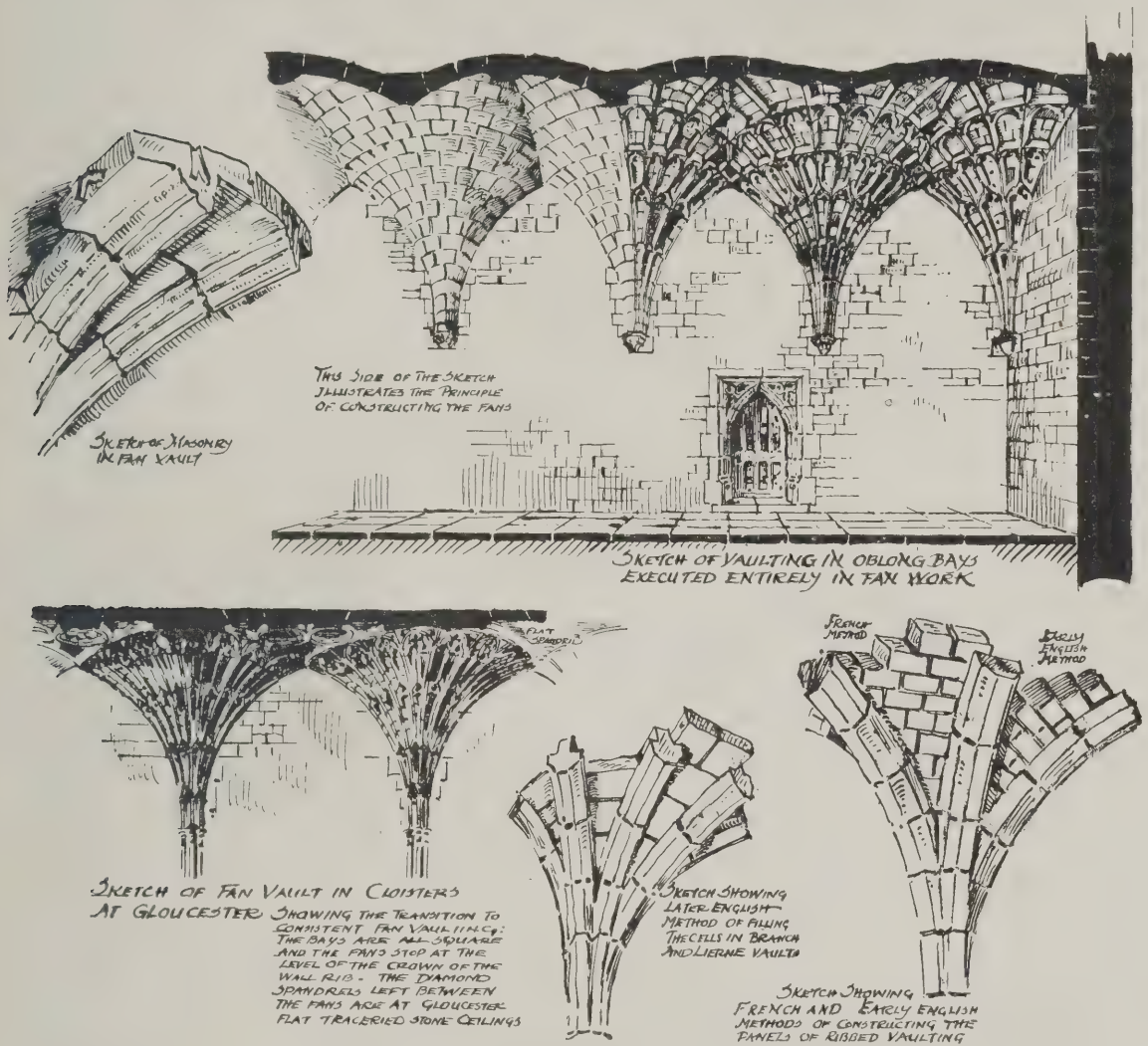

Sketch of Masonry in Fan Vault
This Side of the Sketch Illustrates the Principle of Constructing the Fans
Sketch of Vaulting in Oblong Bays Executed Entirely in Fan Work
Flat Spandrils
Sketch of Fan Vault in Cloisters at Gloucester Showing the Transition to Consistent Fan Vaulting: The Bays are all Square and the Fans Stop at the Level of the Crown of the Wall Rib - The Diamond Spandrels left between the Fans are at Gloucester Flat Traceried Stone Ceilings
Sketch Showing Later English Method of Filling the Cells in Branch and Lierne Vaults
French Method
Early English Method
Sketch Showing French and Early English Methods of Constructing the Panels of Ribbed Vaulting

Fig. 8.

the same time there was more risk of disaster in the event of any serious miscalculation of the thrusts or any unequal subsidence of the foundations.

If one examines the sections of mediæval vaulted buildings it will be found that certain rules of thumb seem to have guided the builders in determining the thickness of the columns and the depth of the buttresses. In buildings without aisles, like Albi Cathedral or King's College chapel, the wall, plus the buttress, is equal to half the span of the vault. In other words, the section at the buttress shows voids and solids practically equal. In aisled buildings two methods seem to have been used: in the first the aisle wall and buttress is equal to half the nave span, and in the second the aisle wall and buttress, plus the nave pier, total up to the

same dimension, the thickness of the nave pier being generally half the width of the aisle. It seems reasonable to assume that the builders considered that the proper size for each abutment of an arch was half the span, and they appear to have been satisfied with fulfilling this condition whatever the height of an arch and whatever might be the load it carried. This idea may be traced right down to the end of the Gothic period. In considering the structure of Wells Cathedral we observed that its rudimentary flying buttresses are formed as three-quarter arches and thus are engaged in the clerestory wall. The same peculiarity may be observed in some of the lower buttress arches at Westminster. The decadent French builders of the Flamboyant and Renaissance school frequently treated their flying buttresses as unequal-sided arches with ogee cappings, thus bonding them into their clerestories. But their churches were loftier than ours and their masonry was not executed with English precision, so unequal settlements occurred, the flying buttresses were ruptured owing to the fact that their heads as well as their bases were bonded to the main fabric, and the result was disaster. In the nave of Abbeville, for instance, the high vaults are at the present day supported on timber centering; other late French vaults have had to be taken down and replaced with lath and plaster; at Orleans the apse vault fell to the ground within the last few years. Many of these late French vaults are elaborately ribbed, in emulation perhaps of English examples, but their cells are constructed merely of rubble masonry in small stones. They possess neither the elasticity of the best French constructions, nor the precision and solidity of the late English masonry.

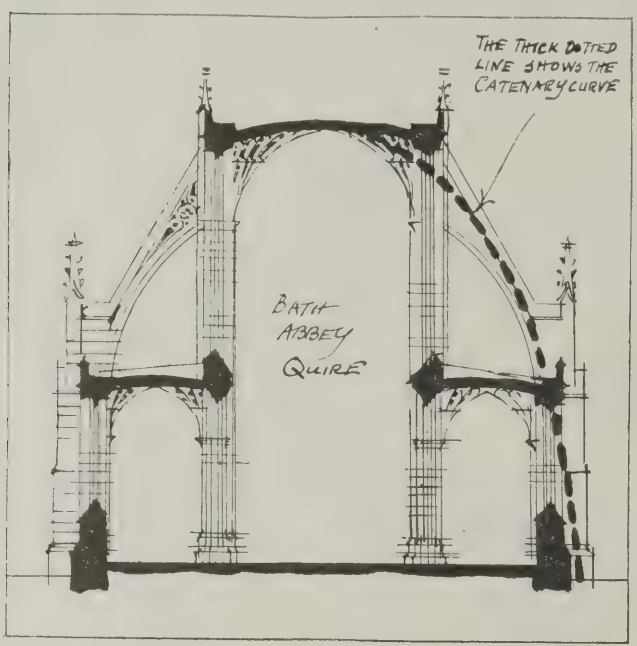


Fig. 9.

Examining again the cross sections of our own late Gothic vaulted buildings, such as the Presbytery of Wells, Bath Abbey, and St. Mary Redcliffe at Bristol, we find that the lines of the vault and the arches of the flying buttresses frequently approximate to an inverted catenary curve the full height of the building. This may be a mere coincidence, but it is at least possible that the builders considered that the curve assumed by a chain of uniform density when suspended at each end would, if inverted, give the proper form for an arched structure of uniform density resting in perfect equilibrium. Reasoning on these lines it was probably felt that the thrusts of an arched structure would be most efficiently neutralised if the general disposition of the materials followed approximately the curve referred to, although, of course, the conditions in a building do not correspond closely to those in a chain whose links are all the same size and weight.

The general use in France of apses surrounded with aisles and chapels gave scope for a good deal of ingenuity in the construction of vaults and roofs. In the high vaults a variety of plans was adopted in order to provide a western abutment to the central keystone of the apse. The most usual plan was to set out the apse either as five sides of an octagon or seven sides of a dodecagon, the first method giving two straight bays with three

in the sweep of the apse, the second two straight and five apsidal bays. Both methods brought the vault keystone into the middle of the straight part of the apse, thus providing an abutment to this keystone in a natural and simple manner. A curious mannerism practised in Normandy was to continue all the eastern radiating ribs across the western cell of an apse vault planned on the lines just described, stopping them on the easternmost cross arch of the straight vault of the quire, just as if the apse were a slice cut off from a domical church, like St. Géréon at Cologne.

A fairly common plan was to set out the apse as a half decagon, as at Bourges and Troyes cathedrals. This, of course, brought the keystone on to the chord of the apse, and in order

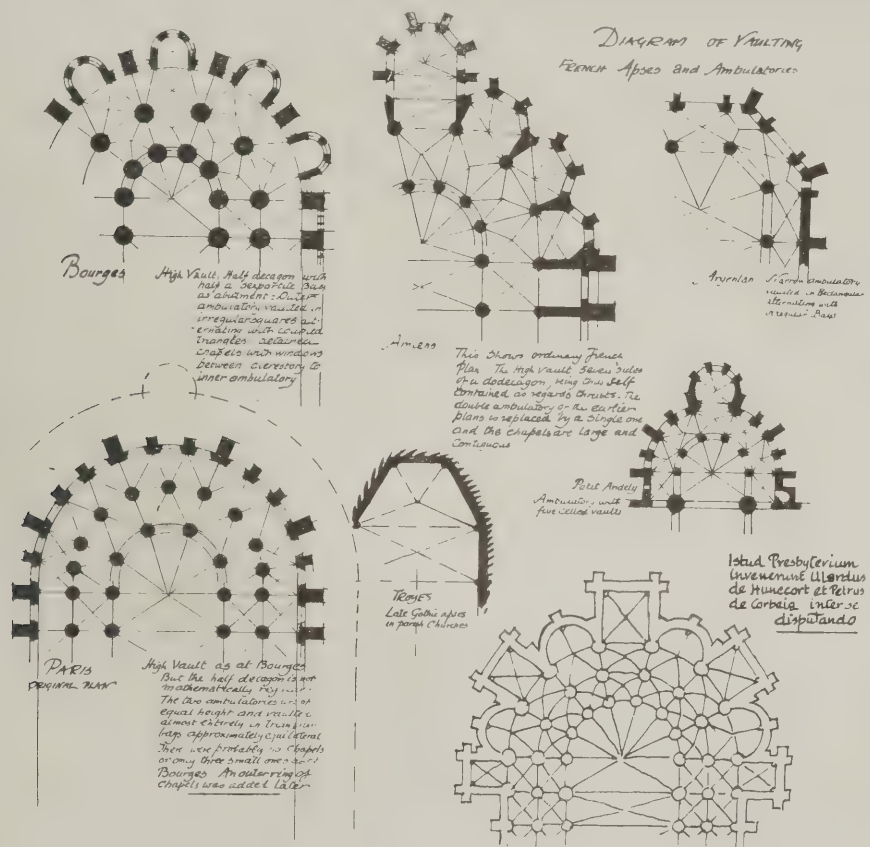


Fig. 10.

to provide an abutment to the apse vault the eastern bay of the quire was planned like a portion of a sexpartite vault instead of with diagonal ribs intersecting in the ordinary way.

Some of the later Gothic churches at Troyes have half-hexagon apses, and these are vaulted in a very simple manner by merely placing the keystone a little east of the true centre of the apse and vaulting with four ribs to the angles, as if the apse were an ordinary bay of irregular plan and not conceived as part of a polygonal structure.

In vaulting an apsidal aisle, especially one with chapels, or still more a double aisle, there arose certain difficulties owing to the great differences in the widths between the points of support which necessarily were set out on lines diverging like the spokes of a wheel. In the irregularly shaped bays of the aisle some of the arches were wide and squat while others were tall and narrow, and the vault surfaces were twisted and distorted. This was felt to be a defect,

which was met by a variety of expedients. At Notre-Dame, Paris, a number of intermediate columns were introduced in the outer aisle so as to divide the whole space up into approximately equilateral triangles; all the arches of the ambulatory were thus approximately equal in span as well as in height, and the triangles were vaulted in with a quasi-domical filling.

Exactly the same device was used in the fourteenth-century undercroft of the Chapter House at Wells. It will be noticed that the plan adopted at Notre-Dame necessitated one of the outer ring of columns being placed on the axis of the church, and this may have offended the taste of the builders, for the experiment was not repeated. In some cases circular ambulatories were subdivided into triangles and squares alternately, as is the case in the Templars' Church, London. The compartments thus obtained were of a manageable shape, and this is the plan adopted at Le Mans; but in that particular building it necessitated each of the great flying buttresses being bifurcated in respect of its outer portion, an arrangement much more costly, no more efficient, and much less beautiful than the ordinary plan of single radiating abutments.

Various experiments on these lines may be followed in some of the later French work, but the problem was never solved in a really satisfactory manner, and in most cases the drawbacks of irregular quadrilateral compartments were tolerated, and moreover the practice of surrounding the apse with a double ambulatory was generally abandoned after the middle of the thirteenth century. A pretty treatment of a single ambulatory may be seen at Petit Andely in Normandy. Here the Lady chapel is circular and the east bay of the ambulatory approximately square. These fit neatly between the two eastern flying buttresses. The segments of the ambulatory leading up to the Lady chapel form irregular vaulting bays, but the long side of each is given an intermediate rib, and the ambulatory has small secondary buttresses between the big fliers, by which device all the arches are approximately the same span and there is no glaring disproportion. A similar plan was adopted in the very long, narrow compartments of the aisles at Lincoln.

These French apses are the most striking features of Continental Gothic work, and, especially when provided with double aisles, are admirably contrived for privacy in and convenience of access to the chapels. Each of the chapel altars can be seen from almost the whole area of the ambulatories, and yet there is free passage round the church without disturbing the worshippers at any of the chapel altars. But in our English Gothic we have many compensations for the fact that the apse was generally disused after the twelfth century. The planning of the low eastern chapels of the great churches in the south and west of England gives as great an effect of shadow and mystery as is found in many Continental chevets, and the high square-ended quires of our northern and eastern churches are as imposing and dignified as any foreign work. Therefore any attempt to reproduce foreign features, however attractive they may be in themselves, is to be deprecated in England in the present day.

Our Gothic builders faced similar problems to those experienced by the French apse-builders when they constructed the polygonal Chapter Houses of Salisbury and Wells, or the octagonal crossing at Ely. The latter is groined only in wood, but is a most interesting construction, being roofed with eight great intersecting trusses from the alternate angles of the octagon. This plan gives an upper lantern octagonal in plan, but with its angles on the axes of the nave and transepts.

Probably the grandest piece of modern masonry construction is the central octagon of the Houses of Parliament with its stone superstructure carried up over 200 feet, a really original and scientific piece of building, unfortunately rather dwarfed in effect by its surroundings.

The series of vaulted churches left us by the late John Pearson are almost equally admirable from the constructive point of view. Following the practice of the Continental builders of the thirteenth century, this artist found it possible to produce a number of most dignified

interiors, full of variety and fancy, constructed in an honest and durable fashion at a cost which was not extravagant.

In these churches the points of support are remarkably light, and a considerable use is made of corbelling, a device by which the thrusts are minimised. The buildings are scientifically poised so as to secure the greatest possible stability with great economy of material, and so skilfully was this done that in several of his churches of almost cathedral dimensions Mr. Pearson was able to dispense with external flying buttresses. In one or two cases he built vaults with high internal buttresses pierced for purposes of passage, as in the case of St. Augustine's, Kilburn, but more generally he employed the ordinary cathedral type of design with aisles and a clerestory, often ending in an apse with a narrow ambulatory round it.

In quoting these modern buildings my purpose has been to suggest that the study of old constructive devices may be of some value in helping us to solve problems which occasionally arise in a modern architect's practice. This is quite a different thing from mere copyism of the architecture of the past, whether Classic or Gothic, or the now fashionable Byzantine or Georgian.

The question of modern materials and constructive methods may be touched upon, steel frame and reinforced concrete building for instance. To encase such buildings in Georgian stone pilaster work seems to me to be a shirking of the problem. How these materials should be treated is a question awaiting solution. Two methods seem reasonable, either to show the concrete or to clothe it with something that is obviously only a surface decoration.

In confidence that the present generation of English architects is capable of evolving a rational constructive and artistic solution of each fresh problem they are called upon to solve, we may look forward with interest to the artistic developments which may result from the modern constructive methods which have to be handled in the present day, always remembering that there is an inexhaustible supply of knowledge to be gathered from the works of the old masters of our art, who achieved results out of all proportion to the means at their command.

Wells Cathedral, from Tor Hill.

REVIEWS.

ENGLISH MEDIÆVAL GOTHIC.

English Mediæval Architecture. By Cyril E. Power, A.R.I.B.A. 2 vols. "The Antiquaries' Primers." Sm. 8vo. Lond. 1912. *Price 5s. [Talbot & Co., 13 Paternoster Row, E.C.]*

It would really seem as if at last a new spirit has breathed over the English text-books of Gothic architecture, and that the day of the paraphrasers and plagiarists of Rickman and Bloxam and Parker is over. Mr. Power's handbook is quite startlingly modern. To the writer it is refreshingly pleasant to see the smashing up of so much mediæval crockery. Our later Gothic, says Mr. Power, so far from being debased and decadent, was "progressive right up to the end"; from Henry the Seventh's Chapel at Westminster the architectural purist turns his face away; but, says Mr. Power, "the constructive vigour of the design, the thin shell so deftly schemed, the light supporting piers and exposed flying buttress, all demonstrate that, right up to the end, the English mason's handicraft, ingenuity, and cunning were as unimpaired and versatile as ever, and, had opportunity offered, prepared for yet more daring triumphs." He accepts too, without reserve, the existence of three schools of early Gothic in England, the insistence on which is one of the many merits of Professor Prior's great work: "the *Northern* school, spreading from the Yorkshire abbeys; the *Western*, emanating from Worcester; and the *South Eastern*, whose centre was Canterbury." Quite rightly too, he notes that though in the thirteenth century the influence of the school of Worcester, Wells, Glastonbury, Pershore, waned greatly, yet "in the fourteenth century the influence of the Western school became paramount once more," and that it was not William of Wykeham's work at Winchester, as the ancient text-books have it, but that of Abbots Wygmore, Staunton, and Horton at Gloucester, which "stamped the impress of the unbending rectangularity of their art on all the other local craft of England." His description of the great Gloucester achievement is as finely expressed as it is accurate: "here the Norman clearstories were pulled down, the ends of the apse and transepts taken out, and on this substratum was erected a lofty clearstory supporting the most tangled of lierne vaults, while vast windows of traceried panels filled in the ends of choir and transepts. It was a daring conception, revolutionary in character, and carried out audaciously. . . The English mason could resist the temptation to suppress the wall for lean constructional purposes; his ideal lay elsewhere; but what he would not do merely to exhibit structural dexterity he did for the sake of admitting the full palpitating chord of colour in the painted window." Nevertheless, in spite of the glories of Gloucester choir, the nearer "example of Ely craft-work lingered long in East Anglia." As regards the contemporary work at Ely and elsewhere, Mr. Power frankly accepts the conclusions of the new school, championed by M. Camille Enlart, which sees in it "the forms and motifs from which the French masons elaborated their fifteenth-century Flamboyant, but which we by that time had discarded in favour of our insular and rectangular Perpendicular." Very rightly too he points out that "our mediæval Gothic was not the result of Continental impulse, half understood, as some would fain make out, and a native art which could only amble along blindly and feebly, assisted by repeated promptings of French methods." "Direct French influence appeared only sporadically at Canterbury and Westminster, and was unable to sway our masoncraft from its chosen path." Westminster Abbey he regards as "the last desperate and artificial attempt to force French tectonic ideals on English work. . . For what happened? Westminster remained a solitary example, without immediate following or marked influence . . . We wanted no homœopathic doses of French learning to keep ourself from relapse into Romanesque." Truly a very Daniel come to judgment! Time fails to recount the many modernisms of view which present themselves as we turn over the pages; the importance attached to the procession path in planning the greater churches of monks and canons; the recognition of the eastern bays of Southwell Cathedral as a Lady Chapel and not as a presbytery; the early date of the bar tracery of Binham Priory; and the excellent criticism of Salisbury internal design. Whatever his obligations to his predecessors he has re-thought out the whole subject for himself and made it his own. And his work is marked by great accuracy.

But a reviewer must have his fling. There is in this book very little of the brilliant and misleading dogma of that great genius Viollet-le-Duc, but we seem to see his impress in the importance attached to Cluniac influence; this however must have been almost nil in England; for from the seventh till late in the eleventh century all the English monks were Benedictines; and at the Suppression the Cluniacs possessed only thirty-two houses, while the Benedictines had hundreds; and while the latter had no less than seven cathedrals, the former had none at all. The fourteenth-century work, he tells us, "reflected the ostentation of knightly magnificence" and in particular "the mingling of religious and military elements in the knightly monastic orders." We will not press the point; but if it is meant, which we hardly think, that the architecture of the first half of the fourteenth century owed anything to the Templars, it may be pointed out that the order was suppressed in 1309, and that, so long as they existed, neither Templars nor Hospitallers ever built a single church of the first rank. Here and there—we say it with bated breath—it looks as if Mr.

Power had been under the spell of a well known *History of Architecture on the Comparative Method*; else how synchronise English architecture of the second half of the fifteenth century with "the Invention of Printing, the Fall of Constantinople, and the Use of Gunpowder"? We can understand that gunpowder may have had something to do with the Fall of Constantinople, but how explosions of gunpowder upreared the churches of East Anglia is not apparent. As for the inspiration of another great authority on Gothic art, we leave the reader to pierce through his anonymity. Who but one writer and one only could have inspired these utterances of Mr. Power?—"Hexham and Whitby set out their square-ended choirs in the fulness of the new-born decorative detailing and with a whole-hearted accent of verticality"; "Ely presbytery, though of the full flavour of perfected Lancet in its decorative appointments, yet betrays the exigent despotism of its Romanesque parentage"; while in Westminster we perhaps see "the accentuated French modulus of verticality." These be prave 'ords.

The book is crowded with illustrations, many of them isometrical sections of the type of those employed by M. Choisy in his *Histoire d'Architecture*; often diagram is set inside diagram, like Chinese boxes, after the manner dear to the architectural student, but which the ordinary reader loathes. The book is creditable alike to the writer's knowledge, industry, and ability.

FRANCIS BOND [*Hon. A.*].

A FACSIMILE EDITION OF SHUTE.

The First and Chief Groundes of Architecture. By John Shute. Facsimile of the first edition, 1563, *with an Introduction by Lawrence Weaver, F.S.A., Hon. A.R.I.B.A. Price* 15*s.* [*Offices of "Country Life."*]

In publishing a facsimile of this scarce book, *Country Life* has done a distinct service to English architecture, more particularly to its history. For in John Shute we have not only the first English author of a book on architecture, but practically the first English representative of the serious study of classical architecture in Italy. Italian artists had come to England by the score during the previous fifty years, bringing with them the seeds of the Renaissance; ambassadors and their suites had looked upon its fruit abroad—literature had already prepared the ground, and now the noble and the cultured desired to cultivate for themselves that of which they recognised the dignity and worth. It is not clear that John Shute already practised architecture when in 1550 he was befriended by that Duke of Northumberland who, but three years before, so narrowly escaped with his life through the death of Henry VIII. the day previous to that appointed for his execution. Yet the Duke must have had some evidence of his architectural ability since he sent him to Italy expressly to study architecture. We may assume that he was there soon after 1550, for the Duke was executed by Queen Mary in 1553, ten years before the publication of John Shute's book and his death in the same year. It is not without interest that, like so many Italian architects of the time, John Shute was a painter as well as an architect.

What gives a special value to the reprint is Mr. Lawrence Weaver's introductory chapters. They evidence most painstaking research in several directions and are at once appreciative and critical. It is a matter for no little regret that none of John Shute's works, either as painter or architect, can now be identified. His book is his sole monument. That it did influence some of the architecture immediately subsequent to its publication seems probable enough, and this facsimile may itself assist the recognition of such instances. Both Mr. Weaver and Mr. Bolton think that Longleat may be such an instance, and they have looked into the matter on the spot with much care. Longleat presents many features which in refinement and knowledge of Italian work are much in advance of other work of the time in England. The late Marquess of Bath was much interested in the history of the house, and made many efforts to discover the authorship of its designs without success. He told the present writer that the explanation which appeared to him most probable was the following: His ancestor, Thomas Thynne, was Secretary to the Protector Somerset, who was contemplating the building of a country mansion for himself, but died before the project was carried out. He thought it not unlikely that the Secretary, having the designs (by an Italian) in his keeping, had decided to make use of them with such alterations as suited his own purpose. This was, of course, surmise only, but fitted the case.

As to the execution of the facsimile, it is careful and correct, but collation with the original shows that the blackness of the ink in the copy gives a certain coarseness to the illustrations, which also suffer a little in the inevitable thickening of the etched lines. The ornamental capitals are worn and sometimes defective in the original, faults which, naturally, are not diminished in the copy. But the whole reproduction is one on which Mr. Weaver may be congratulated, and for which he may be heartily thanked.

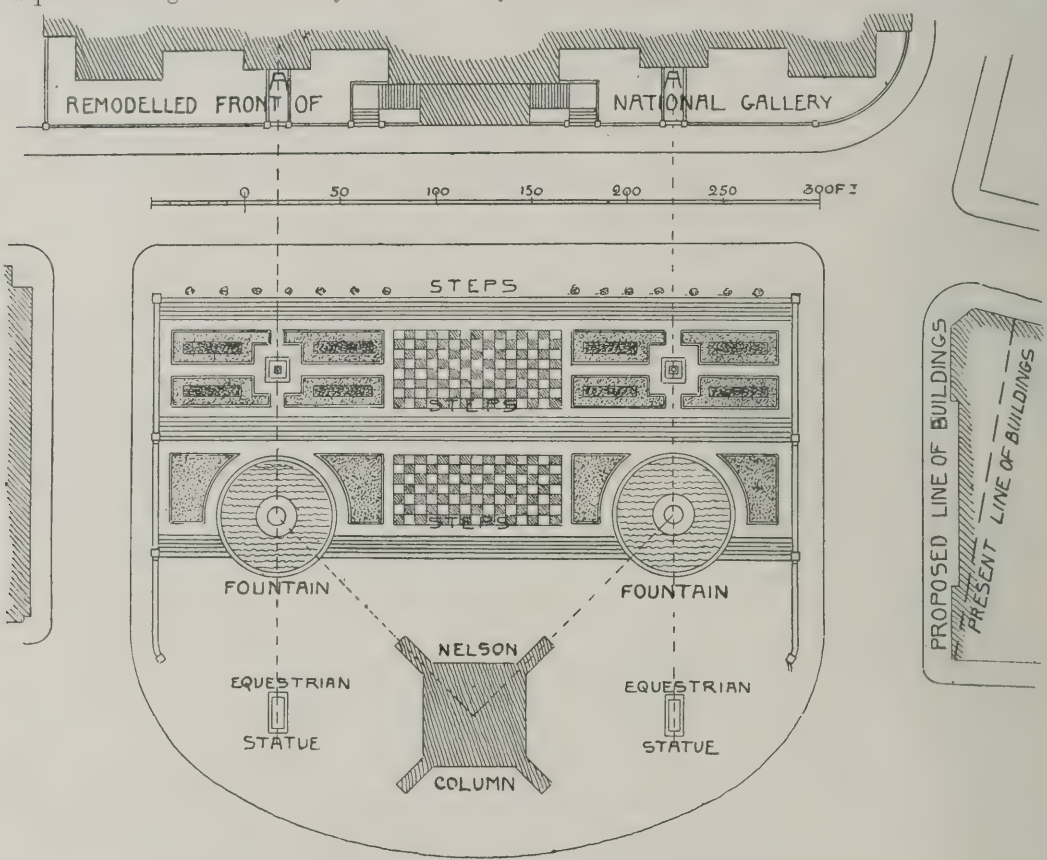
J. D. CRACE, F.S.A. [*Hon. A.*].

The Victoria and Albert Museum "Review."

Following the practice of many museums abroad, the authorities of the Victoria and Albert Museum have published a Review (with illustrations) of the Principal Acquisitions during the year 1911. The Review is to appear annually. This first issue (to be obtained from H.M. Stationery Office, price 1*s.*) gives an account of the more important additions whether by gift, bequest, or purchase, arranged according to the departments to which the objects respectively belong, each section being usually prefaced by a brief statement indicating in general terms the bearing of the acquisitions of the year upon the requirements of the department concerned. A chapter dealing with the principal loans is included.

THE IMPROVEMENT OF LONDON.

Among the schemes for the improvement of certain prominent and important centres of London which are continually being brought forward none have been more urgently needed than those for Trafalgar Square. For it is not only that the Square as it exists now is unsatisfactory and could be immensely improved at comparatively small cost, but that it presents one of the most serious chances for the disfigurement of what is even now one of our finest open spaces. On three sides of the Square we might be suddenly confronted by proposals for some startling and unwelcome changes which would have every chance of being carried out unless some definite scheme for its future design is laid down. A pamphlet by Mr. H. Heathcote Statham* dealing with the subject is timely and interesting, and should do something to clear the ground for future action. Many experts have had their eyes on Trafalgar Square and have formed ideas as to what should be done with it, and Mr. Statham's proposals as regards the Square itself are among the best. There is no doubt that considerable grandeur and dignity of effect would be produced by using a portion of the Square for flights of steps and terraces crossing its whole width in front of the National Gallery. The steps would present some difficulty in the case of Trafalgar Square meetings, though they might perhaps be regarded as galleries from which the better to hear speakers, but their effect, as shown in this design, would no doubt give additional importance and breadth of effect to the Gallery. We doubt if the authorities would consent to the bringing back the pavement to correspond on each side of the Nelson Column, but anything more awkward and unarchitectural than the present arrangement of pavement all round the south side of the Square could hardly be imagined. The danger zone for passengers might surely be greatly lessened by a revised scheme. Part of Mr. Statham's suggestion now published consists of certain additional features to the National Gallery, and a large dome like that which he shows, supported with angle towers, would be none too large a mass for the dominating object behind the coarse Nelson Column. It seems, however, out of scale with the refined and tiny



Mr. Statham's Plan for the Improvement of Trafalgar Square.

* *Suggestion for Re-modelling the Front Block of the National Gallery and Laying-out Trafalgar Square.* Fo. Lond. price 2*s.* 6*d.* Sprague & Co., 69 and 70 Dean Street, W.

order and details of the existing building, with which the present pepper-box feature, insignificant and mean as it is, better accords. In certain other respects, such as the removal of upper floor windows, placing a frieze of sculptured figures and recessed portions in the end pavilions, the design gains in interest and value. It will be seen from the plan that Mr. Statham suggests squaring up the building frontage leading up to St. Martin's Church on the east side, which would add to the balanced dignity of the whole Square.

A real and important object lesson of this Trafalgar Square design is the light that it throws on the present state of London, which is somewhat like that of a rudderless ship, drifting before the storm and stress of modern growth. It is casting no slur on the marvellous energies of our great County Council or our ancient City Corporation to claim that London urgently needs a firm and wise control at the present moment to safeguard her future. Not only has the County Council more than enough to do, but recent history shows how limited is its power to control the development of streets and buildings in the best way. Neither it nor the City Corporation can be for ever paying out huge sums as compensation for street improvements without larger authority than can be obtained from ratepayers and voters. And with such vast sums already owing, it is perhaps not to be wondered at if the County Council has not the courage to face the gigantic task of dealing with the improvement of London as a whole. Perhaps such a great problem as that is for the moment appropriately dealt with by a body like the London Society, which can dispassionately consider what the proper future of London should be from the ideal point of view. If some statesman can be found to take the presidency of that Society he may establish such a Council of Guidance for the Improvement of London as shall ensure a future embodiment worthy of its history and its unique position in the world.

T. Raffles Davison [*Hon. A.*].

CORRESPONDENCE.

Lord Curzon and Tattershall Castle.

17 *S. Peter Street, Bedford:* 15*th July* 1912.

To the Editor, Journal R.I.B.A.,—

Dear Sir,—Writing as an ordinary member of the Institute, I wish to inquire whether some official notice could not be taken of the extremely public-spirited action of the Rt. Hon. Lord Curzon of Kedleston in conserving for the nation the historic building, Tattershall Castle, as announced in the public press last month. What makes me think that the Institute should officially recognise this action is the fact that it has the honour to include Lord Curzon's name amongst its Hon. Fellows, and personally I trust some means may be taken of conveying to him the appreciation of lovers of good architecture.

Thanking you in anticipation for the insertion of this letter,—Yours faithfully,

K. Gammell [*A.*].

The Newer Responsibilities of Architects.

To the Editor, Journal R.I.B.A.,—

Sir,—I did not intend encroaching further on your columns in this matter, but the letter of Mr. Yerbury in your issue of the 15th June apparently invites a reply on several points.

Your contributor states that it is obvious that a client cannot charge negligence, in disputing an architect's account, unless he can prove it. I hope he may never learn from painful experience that, in the world we live in, innocence neither protects against accusation nor pays the cost of defence, however ill-founded the accusation may be.

Mr. Yerbury's difficulties with the case of the *Leicester Board of Guardians* v. *Trollope* will, I think, disappear if he will again read the report of the case and the statement upon it and comments to be found in my Paper.

If again Mr. Yerbury will study the case of *Robins* v. *Goddard*, the importance of the decision of the Judge to which I referred—that the counterclaim set up by the defendant could not be dealt with under the Arbitration Clause, seeing that the counterclaim dealt with matters upon which the architect's decision was, in another part of the contract, stated to be *final*—will, I think, be at once manifest to him.

His observations on the relationship between the cases of *Robins* v. *Goddard* and *Roberts & Co.* v. *Hickman*, I think show that Mr. Yerbury has not made himself thoroughly acquainted with the facts. He states that the House of Lords found, in the latter case, that there was fraud or collusion on the part of the architect, whereas, as I have stated elsewhere, they stated to the contrary. Had the architect been guilty of fraud or collusion there would have been nothing novel or calling for notice in the case, the law upon this point being already so well established. For the important bearing of the case and its influence on *Robins* v. *Goddard*, I beg to refer Mr. Yerbury to my observations in your issue of the 15th June in which I have made my contentions I think quite clear.

Mr. Yerbury suggests the inadvisability of an architect being immune from attack, and in this I think he is confusing two distinct matters. No one can desire that an architect should be immune from the result of negligence, fraud, or incompetence, but whether a client, having contracted with a third party that his architect's decision on certain matters shall be final, should be able to break the agreement at will and constitute himself judge on all matters, technical and otherwise, is quite another matter. This was the principle involved in *Robins* v. *Goddard*. As to whether morally an injustice resulted in that particular case is a different and minor question.

E. Greenop [*A.*].

St. Paul's Bridge and the R.I.B.A.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—In the Annual Report of the Institute, which was submitted to members on 6th May, the Council called attention to their action in connexion with the St. Paul's Bridge scheme.

In the House of Commons on 14th June, 1911, the Chairman of Ways and Means (Mr. Emmott) stated that the representatives of the Institute had "failed in doing their duty." I called attention to that failure at the meeting on 6th May, but my remarks were not allowed to be printed in the Institute JOURNAL, which simply states that I "went on to criticise the inaction of the Council in not attending before the Committee of the House of Commons."

I take this means therefore of stating the facts and of quoting a few comments upon the policy of the R.I.B.A. in connexion with the most important scheme for the improvement of London that has been before the public for many years, a scheme that has frequently been referred to as one of "national importance."

The Royal Institute of British Architects presented a strongly worded petition to Parliament against the Bill: it is printed in the Institute JOURNAL of 18th February, 1911, and it is signed by Mr. Stokes, three other members of the Council, and the Secretary. The following are extracts :—

> Your Petitioners' Institute, as the only chartered body of architects in the United Kingdom, accepts and claims as part of its responsibility and public duty the function of tendering advice to the Government. . . . The advantage to the community of having at its disposal the technical advice and experience of a body of experts is admitted on all hands.

The following are extracts from speeches delivered in Parliament on 14th June 1911; they are taken from the Official Report of Parliamentary Debates, Vol. 26, No. 85, published by H.M. Stationery Office. It can be seen in the Institute Library

> Mr. Mooney (Chairman of the Committee): May I inform the House very shortly what are the facts in this case? The Institute of British Architects petitioned against this Bill, and lodged their petition in the usual form. When the Committee sat the Institute did not think it worth while to appear before the Committee. As chairman of that Committee I expressed astonishment at the fact that the architects were not represented before the Committee, and I went out of my way to invite them to appear before us, and give us the benefit of their ideas. The invitation was mentioned in the London papers, but the architects never appeared before us. . . . I would have been far better pleased if the Institute of Architects had come before us and given us the official view of the scheme.
>
> Mr. Morrell: Had the architects an opportunity of explaining their point?
>
> Mr. Mooney: I said before, I personally invited the architects to come before us and they declined to do so. . . . When the Committee sat the Institute did not appear before them. They wrote to *The Times* and said the reason they did not appear was on the ground of cost. I invited the Institute to send a representative before the Committee. The total cost to the Institute would be four guineas, yet the House of Commons is asked to-night to send this Bill back to the Committee in order to suit the Institute of British Architects.
>
> Sir William Gelder: Why should the architects be required to spend £500 or £1,000 in opposing a scheme of this kind any more than any other class?
>
> Mr. Mooney: If the Institute of British Architects had followed our suggestion they would have incurred no such cost; they could have come before the Committee and given their opinion.
>
> Mr. Lamb: On this occasion the Chairman of the Committee invited them to come to the Committee, and yet they did not appear.
>
> Lord Balcarres [an Hon. Associate of the Institute]: I frankly regret the attitude of the Institute of British Architects. I am not in their confidence . . . from the knowledge I have of architects I think the hon. member opposite was very wide of the mark when he suggested that they did not place their case before the Committee simply because it would have placed a small expense on their personal pockets. I do not believe that.
>
> The Chairman of Ways and Means (Mr. Emmott): Is it fair that the Committee should suffer because architects have failed in doing their duty? The Institute of British Architects did not appear before the Committee, although every chance was given to them to appear. No objection was made to their *locus*, and the chairman sent them a special invitation. I really think the hon. member for Brigg (Sir William Gelder) was hardly fair to the members of his own profession when he said it was a question of cost. I really do not think so meanly of the architects. If this is a matter of great public interest on which they feel so strongly, surely some of them would come forward and give evidence. . . . The architects had their chance and they did not take it.
>
> Mr. Alfred Lyttelton: . . . He has actually said that because the Institute of British Architects failed to respond to the invitation of the Committee, London is for all time to be treated as if that evidence was not forthcoming and as if no other person could give it but the Institute of British Architects. Nothing could be more fundamentally wrong than that. The interest of the public is of great interest here. What has the public to do with the failure of the British architects to come before the Committee?

I believe very few members of the Institute have any knowledge of this severe rebuke by Parliament, which apparently was quite justified. The facts are clearly shown above, and may be briefly summed up as follows :—

1. The R.I.B.A. *claimed the right to advise the Government.*
2. The R.I.B.A. *received the great compliment of a special invitation to advise a select Committee of the House of Commons.*
3. The R.I.B.A. *refused the invitation.*

Who is the man, or who are the men responsible?

Yours obediently,

SYDNEY PERKS, F.S.A. [*F.*].

A Dilapidations Dilemma!

12*th July* 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—May I, through the JOURNAL, present a case for criticism and solution, as I am anxious to know if there is a definite ruling on the point involved in the following circumstances?

X., a doctor of medicine, took a lease of a house for 21 years in 1891. In 1898, X. sold his practice carried on at the house, and assigned the lease, with the consent of his lessor, to Dr. Y. At a later period, Dr. Y. took Dr. Z. into partnership. Later still, Dr. Y. being unable to meet the claims of creditors compounded with them, and then, having no means, he was bought out by his partner, Dr. Z., and Dr. Y. left this country.

In April last, Dr. X., the original lessee, had served upon him a schedule of dilapidations with the usual notice to carry out the repairs within three months.

That Dr. Y., the assignee, would (had he been within jurisdiction and a man of substance) have been liable for dilapidations is generally agreed. Dr. Z. never took an assignment from Dr. Y., and on being asked to do the dilapidations disclaimed liability. He carried on the practice in the house, and paid the rent hitherto paid by Dr. Y. The lease was in his possession, but only as a chattel. Could Dr. Z. be made legally liable? or must Dr. X. make good the dilapidations? —I am, Sir,

EDWARD A. JOLLYE [*A.*].

Earthquake-Resisting Construction.

6 *Bloomsbury Square, W.C.:* 23*rd July* 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—I am venturing to ask through the JOURNAL for an authoritative opinion on the following question: A friend of mine, Dr. Turner, a medical missionary in Nyasaland, wishes to build his house entirely of brick, *i.e.* with a brick arched and barrel-vaulted roof instead of the usual wood and corrugated iron roof on brick walls. There are many obvious advantages in this, but the point is which is the better form in view of earthquakes?

Yours faithfully,

HARRY S. STEWART [*A.*].

Books Received.

Military Architecture in England during the Middle Ages. By A. Hamilton Thompson, M.A., F.S.A. Illustrated with 200 Photographs, Drawings, and Plans. 8o. Lond. 1912. 7*s.* 6*d.* net. Henry Frowde, Oxford University Press.

The Early Norman Castles of the British Isles. By Ella S. Armitage, Hon. Fellow Society of Antiquaries of Scotland. With Plans by D. H. Montgomerie, F.S.A. Demy 8o. Lond. 1912. 15*s.* net. John Murray, Albemarle Street, W.

Canterbury Cathedral. By S. Hurst Seager, F.R.I.B.A. Illustrated with 49 photographs specially taken by the Author. "The Tourist Cathedral Series." Fcp. 8o. Simpkin, Marshall & Co.

The Cathedrals of England and Wales: being a Fourth Edition of "English Cathedrals Illustrated." By Francis Bond, M.A., Lincoln College, Oxford, Hon. Associate R.I.B.A. Illustrated with over 200 reproductions from photographs and a series of ground plans to a uniform scale. 8o. Lond. 1912. 7*s.* 6*d.* net. B. T. Batsford, 94 High Holborn.

Old Towns and New Needs: also the Town Extension Plan: being the Warburton Lectures for 1912. Delivered by Paul Waterhouse, M.A., F.R.I.B.A., and Raymond Unwin, F.R.I.B.A. 1*s.* net. Manchester University Press.

County Churches, Suffolk. By T. Hugh Bryant, Author of "Norfolk Churches" (18 vols.), &c. In 2 vols. Fcp. 8o. Lond. 1910. 5*s.* net. George Allen & Co., Ltd., Ruskin House, 44–45 Rathbone Place, W.

9 CONDUIT STREET, LONDON, W., 27*th July* 1912.

CHRONICLE.

Council Appointments to Standing Committees.

The following appointments to the four Standing Committees have been made by the Council under By-law 51:—

ART.—T. Raffles Davidson [*H.A.*]; H. P. Burke Downing [*F.*]; C. H. B. Quennell [*F.*]; Halsey Ricardo [*F.*]; Edgar Wood [*F.*].

LITERATURE.—John Bilson, F.S.A. [*F.*]; Theodore Fyfe [*F.*]; C. E. Sayer [*A.*]; Leslie Waterhouse, M.A. Cantab. [*F.*]; Edmund Wimperis [*F.*].

PRACTICE.—A. W. Brewill [*F.*]; Matt. Garbutt [*F.*]; John Hudson [*F.*]; Albert W. Moore [*F.*]; Herbert A. Satchell [*F.*].

SCIENCE.—C. E. Bateman [*F.*]; W. R. Davidge [*A.*]; J. E. Franck [*A.*]; H. A. Saul [*A.*]; E. A. Young [*A.*].

Designs of Government Buildings.

Mr. Bennett Goldney, in a recent Parliamentary Paper, asked whether, in view of the dissatisfaction, both expressed and suppressed, with which the designs and accommodation of the more recently completed Government offices had been received by the public, the First Commissioner of Works would arrange with the Government that the preparation of all plans for future public buildings should be thrown open to public competition; whether, in the new buildings already contemplated, he would take steps to prevent any repetition of the mistakes which had so diminished the general comfort and convenience of large portions of so many of our more recent public offices; whether he would see that in any future plans the errors of internal planning, which were so palpable in the new offices of the Board of Trade and other buildings, insufficient lighting of many rooms, over-lighting of many corridors, lavish distribution of space on the one hand and cramped accommodation on the other, were not repeated; whether he would take steps to prevent the continuance of the present style of internal furnishing and so-called decoration of the interiors of our public offices; and whether he would abolish for the future the present system of only inviting designs for public buildings from a privileged panel of selected architects.

Mr. Wedgwood Benn: All these matters are receiving, and will receive, the most careful consideration of the First Commissioner. While guarding against such defects in new buildings as the hon. member indicates, the First Commissioner must not be understood to admit, as a whole, his sweeping indictment of existing buildings. It is not clear to what new buildings of the Board of Trade the hon. member refers.

Mr. Bennett Goldney further asked whether the First Commissioner would in future give the Members of the House an opportunity of examining all competitive schemes for the erection of new or the alteration of old Government buildings before any such schemes were finally chosen and approved, and whether he would give Members an opportunity within the House itself of seeing any schemes which might be selected for final approval before the final choice was made; whether he would inform the House as to the method of appointment of architects and others to the panel from which the designers of our more recent buildings had been selected; whether all qualified architects were eligible for a place on the panel; whether architects might appoint themselves to the panel; and, if not, would he explain why in the past certain architects of merit had been left off the panel while others of less notoriety had been promoted to a place upon it.

Mr. Benn: As has already been promised, designs for all the most important building schemes will be exhibited to Parliament before final approval, but the First Commissioner is doubtful whether opportunity can be given for their inspection within the House itself, though he hopes to be able to arrange it. It was stated last year that in recent cases architects have been selected from a panel submitted to the First Commissioner by the Royal Institute of British Architects. The First Commissioner does not feel himself able to investigate the proceedings of the Institute in drawing up the panel.

International Congress of the History of Art, Rome.

The Tenth International Congress of the History of Art will be held in Rome under the patronage of the King of Italy, from the 16th to 21st October, in the hall of the Royal Academy de' Lincei, Palazzo Corsini. The subjects for discussion are grouped under the following heads: (1) History of Early Christian and Mediæval Art down to the close of the Trecento; (2) The Quattrocento; (3) History of Art from the Cinquecento down to the present day; (4) History of Art Methods; General Precautions for Works of Art; Researches into Artistic Technique; Organisation of Public Works. The Central Committee, acting in concert with the executive, will select readers of papers on subjects of general importance to be brought before the full conference. The languages of the Congress will be Italian, French, English, German, and Spanish. Exhibitions will be held of reproductions of notable works, of Italian art periodicals, of catalogues of private collections, sale catalogues, &c., in connection with the subject. The subscription for a full member is 25 lire (£1 sterling); for ladies, relatives of members, 10 lire; for students furnished with a University ticket, 10 lire. Application for tickets and for all information should be made to the Secretary-General of the Congress, Signor Roberto Papini, Via Fabio Massimo 60, Rome.

A Correction.

From Sir Charles A. Nicholson, Bart. [*F.*]—

"I notice in reading Mr. Maurice B. Adams' paper in the Journal of 29th June that I am credited with the design of the reredos now in St. Mary's Church, Hornsey. This is a mistake. The commission was given to my partner, Mr. H. C. Corlette, who was entirely responsible for the design and supervision of the work."

Obituary.

Thomas Arnold [elected *Associate* 1867, *Fellow* 1904, placed on list of *Retired Fellows*, 1904] passed away on the 12th July. He practised as an architect in London for about forty years, returning to Edinburgh, his native place, twelve years ago. He was a pupil of David Cousin, the City Architect of Edinburgh, going through the usual course of studies at the Edinburgh School of Design under Mr. Christie, R.S.A., and Mr. Dallas. Mr. Christie, who formed a Sketching and Measuring Club, did great service for the young architect in days when he had nothing like the facilities of the present time; and one recalls the pleasure which the careful study of Holyrood Abbey and other old buildings in and around Edinburgh afforded the enthusiastic learner, and the happy comradeship of those golden days. Many members of that class and of the School of Design have risen to more or less eminence as painters, sculptors, and architects. Mr. Arnold, on the completion of his pupilage, ventured to London and was in the office of Sir Horace Jones for a season, afterwards beginning practice for himself, and erecting various Presbyterian and Congregational churches, houses and places of business. He directed his attention, as so many have done, to the study of the Halicarnassus problem, and his solution, the writer thinks, is the most satisfactory that has been reached. A paper, with illustrations of his theory, appeared in the *Transactions* of the Edinburgh Architectural Association, Vol. III., and a perspective view of it is in the possession of the R.I.B.A. which might well be published. He was devoted to literature, and had several papers on "Scottish Architecture" in some of the early numbers of the *Architect*, illustrated with drawings by the etcher, Axel Haig.—G. S. Aitken, Architect, 33 Castle Street, Edinburgh.

ARCHITECTS FROM GEORGE IV. TO GEORGE V.

By Maurice B. Adams [*F.*].

(*Continued from page* 607.)

G. F. BODLEY, R.A., stamped everything that he did with the utmost refinement and distinction, as well as much originality; his work would have graced any period of architecture. St. Michael's, Brighton; All Saints', Cambridge; the Church of the Holy Angels, Hoar Cross; St. Augustine's, Pendlebury; St. Mary's, Clumber; St. John's, Cowley, Oxford; St. Edward's, Holbeck; and Holy Trinity, Kensington, are a few among several remarkable examples of beauty and reserved power. Mention must also be made of the River House, Chelsea; the School Board Offices on the Embankment; Christ Church Buildings and St. Swithin's Quadrangle, Magdalen College, Oxford; King's and Queen's Colleges, Cambridge; and Washington Cathedral. His character was as charming as his work, and no one had a wider experience in perfecting design in the applied arts. Part of the work mentioned was done of course in conjunction with Thomas Garner. Bodley's reredos at King's Lynn is only one of many similar erections of his skill. When he was elected A.R.A. he told me that his works sent to the Royal Academy for exhibition were refused by the Council because, as they said, his share in the designs must pass without question, and Mr. Garner's part in them must be considered. This absurd contention much amused Bodley.

William Burges I also knew personally. His wonderful house at Melbury Road is worthy, like the Musée Plantin, Antwerp, of belonging to the nation. It is incomparably more interesting than Lord Leighton's house, though no doubt the Arab Hall of the latter, with its old Moorish tiles, is very beautiful and interesting.

William Burges joined H. Clutton in a competition for Lille Cathedral in 1856, which they won. Street, who took the second prize, said Burges was so familiar with French prejudice that he had taken the precaution to use French paper, and thereby obtained undue advantage. However that may be, Burges' drawings were so quaintly executed that Viollet-le-Duc at first believed that they were old drawings of the thirteenth century, till he discovered "Whatman's" water-mark in the paper. The church at Lille is a wretched building, boiled down from Burges and Street's designs, and erected by a local man named Leroy, Burges and Clutton having been got rid of.

The designs of William Burges were always thorough, including the most minute detail. Cork Cathedral; his churches at Skelton and Studley Royal, near Ripon; Cardiff Castle; St. Faith's, Stoke Newington; the Speech Room, Harrow, are among the most important. His design for the Law Courts was architecturally by far the best. The scheme which he made for decorating St. Paul's Cathedral by a veneer of marble was shown at the Royal Academy in 1873. He was a most capable writer and the kindest of friends, though his temper was certainly volatile. When fitting up Worcester College Chapel, which he did with exquisite skill, he called to see the stalls made by Robinson. The carvings on the elbows represent animals. Burges said the whole thing was abominable and left in a rage. Robinson, feeling hurt, and knowing everything that could be done had been done, put the work back and stacked it away, waiting events. Some weeks after Burges called again, examined the stalls, and was entirely satisfied, though no changes whatever had been made. Only a short time before his death the Academy did itself the honour of electing him A.R.A. Burges' design for Edinburgh Cathedral would grace any period of art.

E. W. Godwin, F.S.A., like his personal friend, William Burges, imported French Gothic mannerisms, and exercised a great influence on his fellows, though, considering his genius, Godwin's career individually was largely a failure owing to his own personal shortcomings. Congleton and Northampton Town Halls, Dromore Castle, Glenbigh Towers, and some work at Castle Ashby for the Marquis of Northampton are his designs. He won the first competition for the Town Hall at Leicester, and built Whistler's house at Chelsea, and others at Bedford Park. Godwin created a style of his own, and took up Japanese art with ability. As a writer, and as an authority on costume and dramatic staging, he was unsurpassed.

George Edmund Street, R.A., architect of the Law Courts, was in every sense a great architect. His books on the brick and marble architecture of Italy and Gothic architecture in Spain display indefatigable industry and a discriminating incisive style. Bristol and Christ Church Cathedrals were partly rebuilt by him. Street told me that when the Dublin work was in hand a detail for the entrance arch was asked for. He drew it out on the spot, full size. As the structure proceeded a fragment of the old arch was found which proved to be identical with the profile he had supplied—so scholarly was Street's knowledge. His design for Edinburgh Cathedral was an excellent performance. Other examples of note are his fine churches at Kennington, Paddington, Eastbourne, Clifton, Bournemouth, and Oxford, also St. James the Less, Westminster, and the Convent at East Grinstead. Like Barry and Scott, Street was buried in Westminster Abbey; Bodley designed the brass over his grave.

I must be content merely to name some of the most able church architects of their day: John Prichard, Wm. White, R. J. Johnson, H. Clutton, J. S. Crowther, M. E. Hadfield, George Goldie, E. G. Paley, Mr. Archibald Dunn, and S. S. Teulon.

John P. Seddon, at one time Hon. Secretary of the Institute, did good work during the sixties; and John Douglas, neglected by the Royal Academy, created quite a school of his pupils, and well deserved the Royal Gold Medal which he did not get. He had just completed an exceptional house in which every detail followed the solid thoroughness of mediæval timber-building. Meeting the client on the job the employer said, "Very nice and all that, but damned expensive, Douglas." "True," replied the architect, "I found it so; I spent more than my commission on my clerks' wages looking after the work, and I don't think the builder has made a five-pound note out of his contract; but I'm glad you think it nice."

The enormous advance in church development and planning throughout the time just considered was further extended by others. George Gilbert Scott, Junr., as he was called, erected St. Agnes', Newington, in 1877, and All Hallows, Southwark, some years later, realising the poetry and efficiency of ecclesiastical work of a plainer kind in brick for the purposes of town churches and advanced Anglican worship. J. D. Sedding's two London churches—Holy Trinity, Sloane Street, and the Holy Redeemer, Clerkenwell — are exceedingly clever and well contrived, though quite different, and are characteristic of his duality of mind and versatile taste. Sedding usually made his sketches in a green-covered ledger-like book; one day, when out with him and a few companions, someone remarked as we walked along a country road, "What a curious book Sedding is using." "Not at all," ejaculated Sir Thomas Drew, "for he invariably designs and draws on the principle of 'Double Entry.'"

J. F. Bentley's smaller churches are very charming, and the Cathedral at Westminster will hand his name down to posterity, though it is doubtful if it will ever look so grand inside when decorated, as in its present plain carcase state, with the brick joints to give it scale. His seminary of St. Thomas at Hammersmith, though so plain, is a greater success than his florid College near Windsor.

St. Martin's Church in the Lewes Road, Brighton, erected about 1876 by Mr. Somers Clarke, F.S.A., possesses many masterly qualities.

It is hopeless to try even to mention all that deserve notice, but Mr. Wm. Niven's church at Teddington, Mr. A. H. Skipworth's church of St. Etheldreda, Fulham, some by Hodson Fowler of Durham, and others by Mr. Temple Moore, Mr. Cecil Hare, Sir Chas. Nicholson and Mr. W. Tapper are works pointing to possibilities of becoming worship; and Mr. J. Oldrid Scott's country churches, his Selby Abbey restoration, and his completion of the Duke of Norfolk's great church at Norwich, must be named. Of course the noble Cathedral at Liverpool, now being built by Mr. G. Gilbert Scott, is more important, and the Lady Chapel has already been completed. One could but wish that the sea-weedy carving in this building might be modified or stopped. The design chosen in the competition by Messrs. G. F. Bodley and Norman Shaw has been much altered in execution.

One note has to be added to give an idea of what is at the back of the ecclesiastical development of architecture in churches. In 1854 seventeen cathedrals only had monthly celebrations, twelve others had weekly communions, and not a single cathedral a daily Eucharist. Now there are 9,000 churches in England with celebrations every week, and about a thousand with daily celebrations, not to mention the keeping of churches open for use all day long and many daily services.

Briefly let us turn to civic buildings, in which connection the Town Halls of Leeds and Hull by Cuthbert Broderick come to mind for their classic merit, which also marks John Burnet's works in Glasgow, with many others of distinction at Aberdeen and Edinburgh. Greek Thomson, too, had his admirers, though his work leaves me cold. I must mention Banks and Barry's buildings forming the quadrangle in front of the Royal Academy, and the Palladian buildings at its rear for London University by Sir James Pennethorne, erected in 1868; also the City Liberal Club, by Mr. G. E. Grayson, a few years later. David Bryce erected the Bank of Scotland, and J. Dick Peddie's work we recall with praise.

Alfred Waterhouse, R.A., of stupendous practice, was no sooner out of his articles than he won the Assize Courts at Manchester. Edmund Sharpe told me that Waterhouse had acknowledged to him how useful he had found the books of classified mouldings published by Sharpe, for, said he, "I was in the thick of my business before I was really ready." Manchester Town Hall demonstrated the unequalled skill of Waterhouse as a planner, and as a water-colourist he was graphically artistic. His excellent buildings all over the kingdom speak of him as an architect, and the Natural History Museum, if hard in material texture and not very happy in its colour, is not put out of countenance by its newer neighbours.

George Corson of Leeds, born the same year as Waterhouse, worked on the same modern lines with ability. Here we must not omit a line on "Victorian Harris," whose efforts, which won him this name, were by no means so trivial as some said they were. Bassett Keeling made a stir when he startled folk with his Strand Music Hall "Fancy Brand" front, for that was florid and vulgar enough; whereas Thomas Harris, who built Saltaire, Yorkshire, and another mansion at Stokesay, was an accomplished architect. The best Victorian brick buildings of the civic sort were called "Queen Anne," and the schools designed by John J. Stevenson in conjunction with Mr. E. R. Robson were admirably refined and clever. Mr. Basil Champneys, Mr. Philip Webb, Eden Nesfield, Richard Coad, George Devey, Sir Ernest George,

and Mr. Norman Shaw have all done work in this way which cannot be surpassed for originality and charm. The new Scotland Yard by Mr. Norman Shaw, and New Zealand Chambers in the City are second to none in their way, and the Rylands Library at Manchester by Mr. Basil Champneys deserves warm praise, though I may be exceeding the rule I laid down at the outset in saying so. The Imperial Institute and Lloyd's new buildings in the City, Wakefield Town Hall, and other conspicuous buildings are associated with Mr. T. E. Collcutt, and the "Criterion" recalls Thomas Verity and his connection with the Albert Hall. Time will not permit of my doing more than mention some other civic buildings, such as the University and Collegiate work at Oxford and Cambridge, Newcastle, Hampstead, Lancing, Roedean and Rugby, Eton, Horsham, Birmingham, Dartmouth, Bangor, and Aberdeen; Town Halls at Bradford, Plymouth, Belfast, Woolwich, Sheffield, Lancaster, Colchester, Cardiff, and Stockport; and Municipal Buildings at Chelsea, Oxford, Glasgow, West Ham, Walsall and Crewe; Public Libraries and Polytechnics all over England; Holborn Viaduct and the Thames Embankment. The Regent Street improvement, the Mall Processional Road, Victoria and Albert Museum, the War Office, the Admiralty Buildings, Charing Cross, the Wesleyan Memorial Hall, and the Strand enlargement scheme are fresh in our minds. The Office of Woods and Forests in Whitehall scales better with Inigo Jones's Banqueting Hall than any of its neighbours.

English and Scotch domestic work has exceeded in merit all foreign competition, and bids fair to reach a more general application as men learn to omit senseless detail and elaboration, depending instead more on outline and good proportion; but the Gothic spirit must be retained to keep it virile and adapted to modern requirements and domestic comfort. To quote Milton: "It is for homely features to keep Home."

The introduction of ferro-concrete construction and the facility of transporting materials, as well as the multiplication of specialists' building appliances, have not only quite revolutionised the contracting trades, but settled for ever the influence of local materials on work in different parts of the land. Curiously enough, it is the Metropolitan architect who now is most keenly anxious to retain indigenous modes and to revive traditional local styles should he be employed where any once obtained. The native architect, as a rule, perhaps to impress his work with what may pass as up-to-date in style, emulates what he assumes to be the latest phase of fashion in town as illustrated in the professional journals. This is a matter of keen regret. A hundred years ago architects were often builders as well: the Brothers Adam, like many less prominent architects, undertook to provide completed buildings. Now, when architects have increased in numbers beyond all hope of lucrative employment, too much architectural work is being expensively handled wholesale by municipal trading schemes on the one hand, and by emporium furnishing firms or stores on the other. Registration is being pressed forward as a remedy. It may help the practitioner, even if it does not improve architecture as an art, for that depends upon the artist, whose skill is a matter of birthright and not of legal enactment.

No retrospect of the past century can reasonably be complete without some reference to the vexed question of restoration, which with all its disastrous results was carried out in the earlier Victorian period with far too big a letter R; much that was historically valuable and artistically beautiful was destroyed by well-meaning enthusiasts, who scraped and spoiled many a noble building at enormous expense without recognising the value of Architecture and her handmaidens in craftsmanship. We are all agreed about that, and now, let us hope, no capable architect would do anything of the sort we deplore. The pity is that the Protectionists do not more often rescue old buildings from thoughtless neglect; in their zeal to prevent an architect from touching an old church to make it more fit for contemporary worship, they overlook the fact that rack and ruin are going on elsewhere unheeded, and no effort is made to save and upkeep all kinds of even more valuable remains which if left alone will cease to exist altogether.

Appendix.

The appended list gives particulars of more or less prominent architects belonging to the period under review, but, to avoid risk of objection to a possibly invidious choice of names, architects still living have been eliminated from the list as originally compiled. A few names are included of men who were distinguished as patrons of architecture, or who are worthy of record as having exercised direct influence on the fine art of building, or as having been engaged in developing the minor arts, or in the literature associated with architecture and craftsmanship. The earlier names on the list are slightly anticipatory of the period under notice.

James Stuart, 1713–1788
Nicholas Revett, 1720–1804 } *Athenian Architecture*, 1762–1818; 2nd edition by C. R. Cockerell, 1825–30.

George Dance, 1741–1825.—Newgate Prison; College of Surgeons, Lincoln's Inn Fields; St. Luke's Hospital.

James Gandon, 1742–1823.—Custom House; Four Courts and Colonnade of House of Lords, Dublin; Pupil of Sir Wm. Chambers.

Joseph Bonomi, 1743–1824.—Woodford Hall; House, Serjeants' Inn, Fleet Street, E.C.

Thomas Leverton, 1743–1824.—Grocers' Hall, Poultry, E.C.; Lay-out of Bedford Square; House, West side of Lincoln's Inn Fields; interesting interiors.

James Wyatt, R.A., 1746–1813.—Worked in the Græco-Italian style; built Pantheon, Oxford Street, and did "Gothick" work, such as Fonthill Abbey, com-

menced 1796; architect to Westminster Abbey; Palace at Kew; Doddington Hall; Ashridge House; restored several cathedrals.

JOHN NASH, 1752–1825.—Lay-out of Regent Street; built Marble Arch; Buckingham Palace; Royal Pavilion, Brighton; Regent's Park Terraces; Haymarket Theatre; introduced the Stucco style.*

Sir JOHN SOANE, R.A., 1753–1837.—Bank of England, 1788; design for House of Lords; Churches, Walworth and Marylebone, &c.; founded Museum, Lincoln's Inn Fields; Gold Medallist.

S. P. COCKERELL, 1754–1827.—Bishop of London's House, St. James's Square; Middleton Hall, Carmarthen; Gore Park, Sittingbourne; father of R. C. Cockerell.

WM. PORDEN, 1755–1822.—Pupil of Wyatt. Eaton Hall, Cheshire.

AUGUSTUS PUGIN, 1762–1832.—Pugin and Le Keux's *Normandy*; Pugin and Wilson's books on Gothic, Gables, Ornament, &c., engraved by John H. Le Keux 1812–1896 (also engraved Parker's and Billing's works and Ruskin's *Stones of Venice*).

J. LINNELL BOND, 1766–1837.—Act of Parliament Architect for Waterloo Bridge, for which he made fine design, but which was built by George Rennie, 1817. Bond built Commercial Rooms, Bristol, and Portico to Hotel Stamford. (John Rennie erected London Bridge 1825; cost £2,000,000.)

Sir J. WYATVILLE, R.A., 1766–1840.—Windsor Castle; introduced English version of the Empire style; spirited bird's-eye view, in Diploma Gallery, Royal Academy, of Mansion for Earl of Yarborough, 1826; declined to take Nash's place at Buckingham Palace when pressed to do so by the Regent.

Sir RICHARD MORRISON, 1767–1849.—Kilcuddy Hall restoration; Ballyleigh Castle, Kerry; houses in Scotland; Kilruddery Castle; additions to Cashel Cathedral; County Court House, Clonmel; Shelton Abbey; "Ballyfin"; Court House, Carlow; Longford Castle alterations; Castle Kerry; partner with his son, William Vitruvius Morrison.

* The earliest known "patent" for cement dates 1677 by Kendricks Edisbury. It was called "Glassis," but no record remains as to its materials or process of manufacture. Coade's Patent Stone made of cement was used by Thomas Leverton in Bedford Square and Bloomsbury Street from 1771. The Brothers Adam used Liardet's patent cement stucco for their details and elevational surfaces in Fitzroy Square and the Adelphi. Roman or Parker's cement was patented in London in 1796. Portland cement was patented by Joseph Aspdin (a bricklayer) in 1824. Keen's cement was patented in 1838. Selenitic cement was invented by General Scott, 1870. The term "Stucco" vernacularly embraces two divergent things. One is a finer kind of mortar with ordinary carbonate of lime for its base, generally burnt limestone or hill chalk, and this "stucco," rightly so termed, sets very slowly, resists the action of the weather, and can be washed. It can be modelled when wet direct, being a pliable material. The other, designated "plaster of Paris," is based on sulphate of lime, prepared for use by burning gypsum or alabaster; it sets and becomes hard very rapidly. It perishes by exposure and cannot be washed. Clay or other plastic material has to be employed for moulds in which to cast the plaster. Both stucco and plaster were familiar to the ancients. In 46 B.C. Vitruvius gave exact instructions for stucco-making, and so hard and smooth was its finish that mirrors were made of its polished surface. In Mycenæ archaic stucco is extant, and Geo. T. Robinson said he had seen stucco, laid centuries before Vitruvius's day, in better condition and less weather-worn than the marble which was placed alongside it. Canvas plaster, revived a few years ago, was well known to the ancients for masks on mummy cases.

DAVID HAMILTON, 1768–1843.—3rd premium for Houses of Parliament; Royal Exchange, Glasgow; Hamilton Palace; Lennox Castle; Western Club, Glasgow; British Linen Union; Clydesdale and Western Banks.

DANIEL A. ALEXANDER, 1768–1846.—Additions to Longford Castle; Prisons at Dartmoor and Maidstone.

JOHN YENN, R.A., –1821, Architect.—First of the Alumni of the R.A. who served their Alma Mater in an official position; Treasurer R.A. 1796 in place of Sir William Chambers.

WILLIAM STARK, 1770–1840.—Glasgow jail; Lunatic Asylum, Parliamentary Road; Hunterian Museum; St. George's Church, Glasgow; Sir Walter Scott described him as a genius.

INWOODS (Senr. and Junr.) 1771–1843, 1798–1840.—Westminster Hospital; St. Pancras Church, Euston Road.—(W. H. INWOOD) St. Martin's Chapel; Regent Square Chapel; published *The Erechtheion at Athens.*

JOHN BRITTON, 1771–1851.—*Architectural Antiquities of Great Britain*, 1807–26; Restoration Redcliff Church, Bristol; *Cathedral Antiquities*, 14 vols.

JAMES SARGANT STORER, 1771–1853.—*Cathedrals of Great Britain*, 1814–19; influenced Sir G. G. Scott.

JOSEPH M. GANDY, A.R.A., 1771–1843.—Pupil of Wyatt; Phœnix and Pelican Insurance Office, Charing Cross; additions to Lancaster Prison; Buildings in Liverpool; *Designs for Rural Buildings.*

W. ATKINSON, 1773–1839.—Pupil of Wyatt; Abbotsford for Sir Walter Scott, 1815.

R. ABRAHAM, 1773–1850.—Middle Temple Library; Smith & Son's premises, Strand.

JOHN SHAW, 1776–1832.—St. Dunstan's Church, Fleet St.; Great Hall, Christ's Hospital (now demolished).

JOSEPH WOODS, 1776–1864.—First President of the London Architectural Society, 1806. (Savage and Elmes were Vice-Presidents, and Mr. Bushley Secretary.

P. F. ROBINSON, 1776–1858.—One of the first Vice-Presidents of R.I.B.A., 1835–9; published *Vitruvius Britannicus*, 1833, with drawings by Henry Shaw, of Hatfield, Woburn, Hardwick, and Castle Ashby.

THOMAS RICKMAN, 1776–1841.—*Attempt to discriminate the Styles of Architecture in England*, 1819; built St. George's Church, Birmingham, 1822; New Court, St. John's College, Cambridge; restored Bishop's Palace, Carlisle; erected twenty-five churches in the Midlands; helped Parker with *The Glossary of Architecture*; assisted by Twopenny (1806–1884).

JAMES GILLESPIE GRAHAM, 1777–1855.—Competed for Houses of Parliament, assisted by A. Welby Pugin, and with him built Victoria Hall, Edinburgh, 1842; chief work, Convent, Whitehorse Lane, Edinburgh; introduced purer Gothic work into Scotland; Culdees Castle, Perth; Ross Priory, Dumbarton; Dunse Castle, Berwick.

JAMES HAKEWILL, 1778–1843.—*Attempt to determine the Exact Character of Elizabethan Architecture*, 1835.

W. WILKINS, R.A., 1778–1839.—University College, 1827; National Gallery, 1832 (cost £100,000); St. George's Hospital; University Club; Downing College, Cambridge.

J. P. PAIN, 1779–1877
G. R. PAIN, 1793–1839
} Pupils of Nash; Court House and prison for males, Cork, 1818.

JAMES SAVAGE, 1779–1852.—St. Luke's Church, Chelsea; Richmond Bridge, and Bridge over the Liffey, Dublin.

Sir ROBERT SMIRKE, 1781–1867.—British Museum, 1823; Post Office, St. Martin's-le-Grand; Drury Lane Theatre.

THOMAS PHILIP, EARL DE GREY, F.R.S., 1781–1859.—First President of the Royal Institute of British Architects, 1834–59.

CHARLES WILD, 1781–1835.—Pupil of T. Malton; illustrated Canterbury Cathedral, 1807; York, 1809;

Chester, 1813; Lichfield, 1813; Lincoln, 1819; Worcester, 1823.

J. S. Cotman, 1782–1842.—*Architectural Antiquities of Norfolk and Normandy*, 1818; *English Counties*, 1838.

Samuel Prout, 1783–1852.—Discoverer of the Picturesque in Old Cottages and Domestic Architecture; illustrated Britton's *Beauties of England and Wales*, 1801–18.

J. C. Loudon, 1783–1843.—Editor of *The Architectural Magazine*, 1833; author of *Encyclopædia of Cottage and Farm Buildings*, 1832. (*The Builders' Magazine*, 1786, was edited by "George Cook, Architect and Builder," and illustrated by John Carter.)

Thomas Hamilton, 1784–1858.—Founder of the R.S.A. Burns Monuments, Alloway, Edinburgh, and Ayr; the College of Physicians and High School, Edinburgh; Knox Column, Glasgow; Town Buildings and Spire at Ayr.

Joseph Gwilt, 1784–1863.—Restored Southwark Cathedral, 1830. Published *Encyclopædia of Architecture*.

Samuel Beazley, 1786–1851.—Fourteen theatres and Ionic Colonnade, Drury Lane.

L. N. Cottingham, 1787–1847.—Architectural books; *Henry VII. Chapel*, in two volumes; made a famous collection of casts and examples, which formed part of the Royal Architectural Museum.

John Dobson, 1787–1865.—Central Railway Station, Newcastle; exhibited the first coloured architectural drawing ever shown at the Royal Academy; till 1815 architects had to send black-and-white or brown line drawings, similar to Wyatville's diploma drawing.

J. P. Deering, R.A., 1787–1850.—Formerly Gandy; joint architect of University Club, now demolished; associated with Wilkins; Exeter Hall (demolished); St. Mark's Church, North Audley Street, N.W.

Charles Wilson.—Faculty Hall; Free Church College and Church, Glasgow High School; Gartnavel Asylum; practised from 1835.

G. L. Taylor, 1788–1873.—*Stones of Etruria, and Marbles of Ancient Rome*, 1859; laid out Westbourne Terrace and neighbouring squares.

Prof. C. R. Cockerell, P.R.I.B.A. (1860), 1788–1863.—Taylorian Building, Oxford; finished St. George's Hall, Liverpool; Philosophic Institution, Bristol; Hanover Chapel, Regent Street (demolished); St. David's College, Lampeter; National Monument, Calton Hill, Edinburgh; University Library, Cambridge; Westminster Life Office, Covent Garden; Sun Fire Assurance Office; completion of the Fitzwilliam Museum, Cambridge; Insurance Offices, Liverpool; additions to the Bank of England.

William Henry Playfair, 1789–1857.—Lay-out of new part of Edinburgh; St. Stephen's Church, Royal Institution; National Gallery; Donaldson's Hospital; Free Church College, and Surgeons' Hall, all in Edinburgh.

Edward Blore, 1789–1879.—East Front of Buckingham Palace; repaired Glasgow Cathedral and Lambeth Parish Church; Architect to Westminster Abbey.

William Burn, 1789–1870.—Edinburgh and London; Duke of Buccleuch's House, Whitehall, S.W.; alterations to kitchen and basement of Blickling Hall, Norfolk. Famous for his many mansions and restorations in Scotland. (A saying of his time was that "to get a good restoration or a good house one should get it Burn'd.")

T. Cundy, 1790–1867.—Churches on the Grosvenor Estate, S.W.; Westminster Estate Offices; Gallery in Grosvenor House.

Thomas Allason, 1790–1852.—Alliance Fire Office, Bartholomew Lane; altered and renovated Blenheim, Woodstock, Oxford.

Lewis Vulliamy, 1791–1871.—Dorchester House, Park Lane; mantels by Alfred Stevens, the sculptor.

Ed. Cresy, 1792–1858 (with G. L. Taylor).—*Architectural Antiquities of Rome*, 1821.

P. Hardwick, R.A., 1792–1870.—Lincoln's Inn Hall and Library.

John Goldicutt, 1793–1842.—First Hon. Sec. R.I.B.A.; alterations at White's Club House.

T. L. Donaldson, P.R.I.B.A. (1863–5), 1795–1885.—Church in Gordon Street, W.C.; Text-book on *Specifications*; connected with the Architectural Dictionary; Convener of the preliminary meeting 1834 to form the R.I.B.A.

George Basevi, 1795–1844.—Fitzwilliam Museum, Cambridge; Pupil of Soane; laid out Belgrave Square.

Sir Charles Barry, R.A., 1795–1860.—Bridgwater House, 1847; Travellers' Club; Reform Club, 1837; St. Peter's, Brighton; Houses of Parliament, 1840 (cost £1,600,000). Clumber House, Nottinghamshire; Gawthorpe Hall, Lancs.; Canford Manor, Dorset; Cliefden House, Bucks; Shrubland Park, Suffolk.

E. Meikle Kemp, 1795–1844.—Scott Monument, Edinburgh.

A. Poynter, 1796–1886.—Crockford's Club, 1827; re-faced Apsley House; Duke of York's Column.

J. T. Scoles, 1798–1863.—Pupil of Ireland and J. Carter; built Jesuit Church, Farm Street, Berkeley Square; St. James's Church, Paddington; Church of Our Lady, St. John's Wood.

Thomas Grainger, 1798–1861.—Lay-out of Newcastle-on-Tyne after the style of Nash's work in London.

Sir Wm. Tite, M.P., P.R.I.B.A. (1867–70), 1798–1873.—Royal Exchange (opened 1844), won in competition against Prof. Cockerell; built Westminster Bank, E.C., and several Railway Stations.

A. Salvin, 1799–1881.—Scotney Castle, 1837; rearranged Longford Castle main front, and added to the house; Restoration of Tower of London and Peterborough Cathedral.

Prof. Willis, 1800–1875.—*Vaulting of the Middle Ages*, and other architectural works on the Cathedrals; *Nomenclature of the Architecture of the Middle Ages*, 1840, &c.

Decimus Burton, 1800–1881.—Athenæum Club; United Service Club, Pall Mall; Hyde Park Screen, 1828; "Conyborough," Lewes, and other mansions.

Henry Shaw, 1800–1873.—*Details of Gothic Architecture*, 1823; Works on Art, Old Furniture and Details.

Chas. J. Richardson, 1800–1872.—Pupil of Soane; Books on Elizabethan work.

Samuel Angell, 1800–1866.—Discovered the earliest-known Greek sculpture now in the Museum—Selinus.

Alfred Bartholomew, 1801–1845.—First editor of the *Builder*, 1843. (First *weekly* professional journal, *Civil Engineers and Architects' Journal*, 1837; *Architects' and Building Gazette*, 1849; *Building News*, first issued 1855, enlarged 1873; *The Architect*, Prof. Roger Smith then editor, 1869; *British Architect*, 1874 (Manchester); *Irish Builder*, 1870; *Builders' Journal*, 1895.)

Sir J. Pennethorne, 1801–1871.—Geological Museum, Jermyn Street; laid out New Oxford Street and Endell Street as part of a town-planning scheme for the Government; built the Record Office, Fetter Lane; West Front of Somerset House, 1842; Pupil of Pugin the Elder; greatly influenced Barry, and was an assistant to Nash.

James B. Bunning, 1802–1863.—Architect to the City of London (1843–63); Billingsgate Market; Islington Cattle Market; Alterations to Newgate Prison, and built City of London School (both demolished).

Jos. A. Hansom, 1803–1882.—Birmingham Town Hall; Church of the Holy Name, Manchester; Church of St. Philip Neri, Arundel; Inventor of Safety Cabs; established *Builder* in 1842.

H. Woodyer.—Church, Wolkingham; Christ Church,

Reading; All Saints' Hospital, Eastbourne, 1866; House of Mercy, Bovey Tracey, Devon.

David Bryce, R.S.A., 1803–1876.—Fettes College; Bank of Scotland; "Cortachy," Forfar, and many Scotch mansions.

W. Railton, 1803–1877.—Monument to Nelson, Trafalgar Square, 1839.

Alex. Dick Gough, 1804–1871.—Pupil of Wyatt; associated with R. L. Roumieu; built several churches in Islington and North London.

C. A. Buckler, 1804–1904.—Centenarian architect; Church at Haverstock Hill; Work at Arundel Castle; Convents and Presbyteries.

Thomas Allom, 1805–1872.—Insurance Office top of St. James's Street, S.W. (demolished); laid out Notting Hill and built a church on the property; exceptionally capable draughtsman.

David Mocatta, 1806–1882.—Stations and Viaducts on London, Brighton and South Coast Railway. (Henry Currey designed Hotel at London Bridge Station.)

Arthur Ashpitel, 1807–1869.—Restoration of ancient Rome and writer of several sessional papers.

Thomas Henry Wyatt, P.R.I.B.A. (1870–3), 1807–1880.—Liverpool Exchange: Wilton Church, Salisbury; many houses; Knightsbridge Barracks; Adelphi Theatre; Royal Gold Medallist 1873.

James Fergusson, F.R.S., 1808–1886.—*History of Architecture*, 1855; amateur. Designed "restorations" of ancient buildings; Architectural critic; built Picture Gallery, Kew Gardens; acted as Assessor R.C. Church, Spanish Place, W.

Sir Henry Cole, K.C.B., 1808–1882.—(Not an architect.) Prominently connected with 1851 Exhibition; Secretary Science and Art Department, 1858–1873; founded S. K. Museum.

E. B. Lamb, 1808–1869.—Books on *Mediæval Ornament*, 1830; *Studies of Ancient Domestic Architecture*, 1846; erected Town Hall, Hemel Hempstead, &c., &c.

Owen Jones, 1809–1874.—Ornamentalist; superintended Exhibition of 1851; joint director of decoration, Crystal Palace; built St. James's Hall, Piccadilly (pulled down); Jackson and Graham's premises, Oxford Street; decorated Khedive's Palace in Egypt. Published *The Alhambra*, 1842–5; *Polychromatic Ornament of Italy*, 1846; and *Grammar of Ornament*, 1856. Travelling Studentship at R.I.B.A. founded by the Misses Jones to his memory, 1886.

Edmund Sharpe, M.A., 1809–1877.—Pupil of Rickman; *Architectural Parallels*; books on details and classified mouldings; used terra-cotta for church work very early at Lever Bridge, 1845; Platt Church and St. Paul's, Scotforth. (See paper before Architectural Association on Terra-Cotta, June 1876, and articles by him in *Building News*, vol. 30, 1876, on this subject; Blashfield's terra-cotta introduced 1855.) Sharpe built 37 new churches; Wigan Parish Church was his first; founded the A.A. Annual Excursions, 1870; Royal Gold Medallist 1875.

Joseph Nash, 1809–1878.—*The Mansions of England in the Olden Time*, 1839–49; and *Architecture of the Middle Ages*, &c.; Pupil of A. Pugin.

Benjamin Ferrey, 1810–1880.—Pupil of A. Pugin; St. Stephen's Church, Rochester Row, S.W.; Town Hall, Dorchester; "Huntsman's Court," "Wynnstay," and other mansions; many churches, parsonages and houses; restored Wells Cathedral West Front; *Recollections of A. W. N. Pugin and A. Pugin*, 1861.

S. W. Dawkes, 1811–1880.—Colney Hatch Lunatic Asylum; St. Andrew's, Wells Street; St. Mark's, Regent's Park, and other churches.

Talbot Bury, 1811–1877.—Pupil of A. Pugin; All Saints' Church, Clapham; St. James's Church, Dover; Hendon Church; St. John's Church, St. John's Common, Burgess Hill; Lodge Windsor, Upper Heyford, Oxford; Town Hall, Weymouth. Published *Remains of Ecclesiastical Woodwork*; worked on Houses of Parliament; made drawings for Owen Jones' *Alhambra*.

F. H. Lockwood, 1811–1878 (Lockwood & Mawson).—Design for Law Courts; built Bradford Town Hall; Hotel, Lincoln's Inn Fields; City Temple on Holborn Viaduct.

Sir George Gilbert Scott, R.A., P.R.I.B.A. (1873–6), 1811–1878.—Leeds Infirmary; Albert Memorial, Hyde Park; Colonial Offices, Whitehall; St. Pancras Hotel; Oxford Memorial; Edinburgh Cathedral; Cathedral and other restorations, including Westminster Abbey; Ely; Hereford; Lichfield; Peterborough; Salisbury; Chichester (spire); St. David's; Bangor; St. Asaph; and St. Albans Abbey; erected mansions and churches at home and abroad, St. Mary Abbots', Kensington; Christ Church, Ealing; competed for the Law Courts; *Spring Garden Sketch Book*; Lectures on the Dome at Royal Academy; Founder of the Royal Architectural Museum; *Lectures on Mediæval Architecture*, 1879; *Gleanings from Westminster Abbey*, 1861; *Restoration of St. Albans Abbey*, 1871.

Ed. C. Hakewill, 1812–1873.—Worked in conjunction with B. Ferrey, and built several churches in East Anglia.

A. Welby N. Pugin, 1812–1852.—Houses of Parliament details with Sir Charles Barry; St. Mary's, Derby; School at Birmingham and St. Chad's Church; St. Gregory's Priory, Downside; Oscott College, 1837; Four churches Liverpool; Pro-Cathedral and Benedictine Monastery, Belmont, near Hereford; Killarney and Enniscorthy Cathedrals; Cheadle Church; extensions to Alton Towers; many churches, and one at Ramsgate erected at his own cost; also "The Grange," close by, where he lived; books on *Contrasts, Specimens, Timber Houses*.

Edward l'Anson, P.R.I.B.A. (1886–7), 1812–1888.—Bible Warehouse, Queen Victoria Street, E.C.; Royal Exchange Buildings; Medical School, E.C., and many office buildings.

F. T. Dollman, 1812–1899.—Dollman and Jobbins' *Domestic Architecture*; Monograph of Southwark Cathedral; built several churches and parsonages.

R. C. Carpenter, 1812–1855.—St. Paul's, West Street, Brighton; Colleges at Hurstpierpoint and Lancing; Church of St. Mary Magdalen, Munster Square; architect to Chichester Cathedral.

W. B. Moffatt, 1812–1887.—Partner with Sir Gilbert Scott; large connection and practice with Poor Law buildings and Infirmary Specialists; won vast number of competitions for same.

M. E. Hadfield, 1812–1885.—Salford Cathedral and other church and educational building work.

S. S. Teulon, 1812–1873.—St. Stephen's Church, Hampstead; St. Andrew's Church, Stamford Street, E.C.; "Shadwell Court," Norfolk; "Hawkleyhurst," Petersfield, 1860.

Richard Crichton. — Lawers Castle; Abercairney Abbey; early writer on Gothic, 1813; carried out much good work for its day in Scotland.

David Brandon, F.S.A., 1813–1897.—Conservative Club, St. James's Street, S.W.; Clubs in Pall Mall and St. James' Square; very large practice, building mansions and country houses; provided £500 for a catalogue of the R.I.B.A. Library.

Henry Lonsdale Elmes, 1813–1847.—St. George's Hall, Liverpool, 1836 (finished by Prof. Cockerell at Elmes' wish); Collegiate Institution; County Asylum, West Derby; died in Jamaica.

E. G. Paley, 1813–1895 (Paley and Austin).—Book of Fonts; Pupil and partner of Edmund Sharpe; Church at Bettws-y-Coed and mountain churches; designs of much beauty; Royal Albert Asylum,

Lancaster; design for the Cathedral at Liverpool; many fine churches, parsonages and schools; *John o'Gaunt's Sketch Book.*

Sir Chas. Lanyon, M.P., 1813–1889.—Belfast Castle for Marquess of Donegall and several buildings in Belfast; Queen's College, &c.; Partner with Mr. W. H. Lynn.

R. W. Billings, 1813–1874.—*Baronial and Ecclesiastical Antiquities of Scotland*, 1845; many restorations in Scotland and England.

John Thos. Rochead, 1814–1878.—Glasgow, originally of Edinburgh; built many churches in Late Gothic, such as St. John's Free Church and Park Church, Glasgow; Bank of England, George Square, and the Wallace Monument.

William Butterfield, 1814–1900.—Indentured to a builder in Horseferry Road, Westminster, for five years in 1831, the same year that he was a student member of the Architectural Society; All Saints', Margaret Street, W.; Keble College, Oxford; St. Cross Church, Winchester, restoration; Church, Stoke Newington; St. Alban's, Holborn; Churches at Kensington and Hammersmith; Rugby College Chapel; Royal Gold Medallist.

John Burnet, 1814–1901.—Glasgow Western Infirmary; Stock Exchange and Banks, Glasgow; many mansions, such as "Auchendenne," "Balmaghie," &c.; Partner with his son, Dr. J. J. Burnet, A.R.S.A.

Ewan Christian, P.R.I.B.A. (1884–86), 1814–1895.—2,040 works; churches, mansions, and parsonages; St. Mark's, Leicester; St. Matthew's, Cheltenham; Economic Insurance Office, Blackfriars; Cox's Bank, Charing Cross; National Portrait Gallery, 1890 (detailed by J. K. Colling); Mayfield, for Lord Penzance; restored Southwell Minster from 1857.

Lord Grimthorpe, 1815–1905.—(Not an architect.) Published *Book on Building*; built Church at Doncaster, by Sir G. G. Scott; "restored" St. Albans Abbey; well known in connection with bells and clocks.

J. J. Cole, 1815–1897.—New Stock Exchange, City; Gresham Life Assurance Offices, Poultry, E.C.; St. Mary's Church, Abberley, Worcester; Bletchington Park for Viscount Valentin.

J. P. St. Aubyn, 1815–1895.—St. Michael's Mount, Cornwall; New Buildings in the Temple; Carillon Tower, Abberley Hall, Worcester; much restoration of ecclesiastical work in Cornwall and Devon.

George Godwin, F.S.A., 1815–1888.—Editor of *The Builder* for 40 years; built Church, West Kensington; Royal Gold Medallist 1881.

F. C. Penrose, F.R.S., P.R.I.B.A. (1894–6), 1817–1903. Architect to St. Paul's Cathedral; built St. Paul's Cathedral Choir School; re-seated St. Stephen's, Walbrook, E.C.; published books on Athenian and Classic Architecture, and studied proportions and refinements of Greek architecture; Royal Gold Medallist 1883.

Alfred Stevens, 1817–1875.—Sculptor and Designer of the Wellington Monument, St. Paul's Cathedral; Vases and Lions fronting forecourt of the British Museum; Chimney Pieces, Dorchester House (1856), Park Lane. Gained first prize for Metal Work, 1851, and certificate 1862. Designed Fireplaces and Lamp Standards; Decorated "Deysbrook," W. Derby, and his own house Haverstock Hill; Two ceilings for the Italian Courts, Crystal Palace; Majolicas and refreshment room tables, South Kensington Museum.

Alexander Thomson, 1817–1875.—"Greek Thomson," built several churches and shops in the Greek style.

John Prichard, 1817–1886.—Llandaff Cathedral restoration; New Probate Registry; St. John's Church, Cardiff; Bute Mausoleum, Cardiff; Cwm Avon Church, Glamorgan; Eastington Park, Stratford-on-Avon; sometime partner with J. P. Seddon.

John L. Pearson, R.A., 1817–1897.—Truro Cathedral; St. Augustine's Church, Kilburn; Churches at Bournemouth, Croydon, and Red Lion Square, Holborn; Holy Trinity Church, Bessborough Gardens, S.W. (very fine tower and spire), St. Peter's, Vauxhall; Catholic Apostolic Church, Kilburn; St. Nicholas', Chiswick; New Astor Estate Offices, Thames Embankment; University Library, Cambridge; Schools, &c., "Westwood," Sydenham. Finished Buckeridge's work; Royal Gold Medallist 1880.

Charles Buckeridge, –1874.—Friend of Pearson's. National Hospital of St. John the Evangelist and Church of St. Mary the Virgin, Cowley St. John, Oxford, 1873.

J. Raphael Brandon, 1817–1877.—(No relation of David Brandon, F.S.A.) Church of the Irvingites, Gordon Square, W.C.; Holy Trinity, Leverstock; St. Peter's, Windmill Street; design for New Law Courts; premises in Clement's Inn, Strand; books on *Parish Churches*, 1858; *The Open Timber Roofs of the Middle Ages*, 1849; *An Analysis of Gothic Architecture*, 1847–9, etc.; partner with J. A. Brandon.

Prof. Hayter Lewis, F.S.A., 1818–1898.—Alhambra, Leicester Square, as a Scientific Institution, but turned into a Music Hall; educationalist and supporter of Royal Architectural Museum and R.I.B.A.

William Slater, 1819–1870.—(Partner with R. C. Carpenter.) Digby Memorial, Sherbourne; Kilmore Cathedral; Joint Architect with Sir G. G. Scott, rebuilding spire, &c., at Chichester Cathedral; new Reredos there (now removed).

Henry Clutton, 1819–1893.—Design for Westminster Cathedral for Cardinal Manning; Mansion for Duke of Bedford, Kensington (now removed); Buildings in Covent Garden Piazza; associated with Wm. Burges in restoring Chapter House, Salisbury Cathedral, and in designing Lille Cathedral. Published book on François Premier Château and Mediæval work, &c., from France, 1856.

John Ruskin, 1819–1900.—*Seven Lamps of Architecture*; *Stones of Venice*; art critic and voluminous writer on art matters.

Sir Horace Jones, P.R.I.B.A. (1882–4), 1819–1887.—Tower Bridge, 1894, cost 1¼ millions (assisted in details by Brangwyn); New Council Chamber, Guildhall; Central Markets, Smithfield; Surveyor to City of London; contested election for Presidentship of R.I.B.A. when Street was elected, 1881.

Joseph Clarke, F.S.A., 1819–1888.—Built fifty new churches—St. Luke's Church, Heywood, Manchester, the most important; St. Alban's, Rochdale; Training College, Culham; House of Charity, Rose Street, Soho; Hon. Sec. Royal Architectural Museum with Maurice B. Adams; designed the building in conjunction with Ewan Christian.

John Gibson, 1819–1892.—Child's Bank, Fleet Street; premises of Society for Promoting Christian Knowledge (added to by Alfred Waterhouse), Northumberland Avenue; Banks in the City; excellent refined designs and detail. Royal Gold Medallist 1890.

P. C. Hardwick, F.S.A., 1820–1892.—Euston Station Booking Hall; Drummond's Bank, Charing Cross; New Charterhouse School; Addington Manor; Birmingham and Paddington Station Hotels.

Right Hon. A. J. Beresford Hope, M.P., P.R.I.B.A. (1865–7), 1820–1887.—President of the Royal Architectural Museum; All Saints' Church, &c., Margaret Street, W., erected at his expense; materially advanced the cause of Architecture and Ecclesiology.

George Devey, 1820–1886.—"Betteshanger," near Dover, "Wilcote," "Combe Warren," "Killarney House," St. Albans Court, Kent; Goldings, Hertford, and many more houses.

Sir M. Digby Wyatt, M.A., 1820–1877.—India Office

interior; Indian Civil Engineering College, Cooper's Hill; First Slade Professor of Fine Art, Cambridge, 1869; Author of *Geometric Mosaics in the Middle Ages*, *The Art of Illuminating*, *Sketches in Spain*; engaged as Secretary of the Executive, 1851 Exhibition; an ornamentalist and writer of eminence; Mansion at Knightsbridge and country houses.

J. Hungerford Pollen, M.A., 1820–1902.—Added incongruous fittings to the big Library, Blickling Hall, and carried out decorations at the Oxford Union and Merton College Chapel, Oxford. Held the Chair of Fine Arts in the Roman Catholic University of Dublin. Originally a clergyman in the Church of England and associated with the Oxford movement. Held official editorship of the Science and Art Department of South Kensington Museum.

Henry Currey, 1820–1900.—St. Thomas's Hospital (Currey & Hunt); Hotel, London Bridge, and Commercial Buildings; Peninsular and Oriental Company's Offices; Baths, Buxton.

J. Woody Papworth, 1820–1870.—Pioneer, Voluntary Examination in Architecture.

J. Drayton Wyatt, 1821–1891.—Founded the Architectural Association, 1847, with Prof. Kerr; made drawings for Dollman's *Domestic Architecture*, and J. K. Colling's *Details*; restored several churches in Suffolk and Gloucestershire.

H. B. Garling, 1821–1909.—Won first Premium War Office, 1857; competed in Law Courts Competition by selection; did Gothic work of merit.

Cuthbert Brodrick, 1822–1905 (Brodrick & Smith).—Leeds Town Hall; Grand Hotel, Scarborough; Hull Town Hall; Leeds Corn Exchange; York Bank, Hull; E. Riding County Offices, Beverley; built himself a château in France.

Wyatt Papworth, 1822–1894.—Projector and Editor of the *Dictionary of Architecture*, 1852–92; Curator of Soane Museum, 1893–4; Bibliographer of Architecture.

Prof. Robert Kerr, 1822–1904.—Founded the Architectural Association (with Drayton Wyatt); built "Bearwood," for Mr. Walter of *The Times*; *The Englishman's House*; and also wrote a novel, *The Ambassador Extraordinary*, in which William Burges was introduced as a character; voluble and able speaker; adept at litigation.

James K. Colling, 1822–1905.—St. Paul's Church, Hooton, Cheshire, and several Churches; detailed work for Ewan Christian at National Portrait Gallery. Published *Details of Gothic Architecture*, *Art Foliage*, and other books; helped Wm. Burn.

Major-General H. G. D. Scott, C.B., F.R.S., 1822–1883.—Science Schools, Exhibition Road, South Kensington, the best example of the use of terra-cotta in London; Royal Albert Hall, Frieze on the Exterior from Cartoons by Poynter, Armitage, and other leading painters; details of the building by T. Verity.

Arthur Billing, 1823–1896 (Newman and Billing).—Pupil of Ferrey; many churches and restorations carefully done after manner of the time; also built business premises; Architect to Guy's Hospital.

Charles Barry, F.S.A., P.R.I.B.A. (1876–9), 1823–1900.—Burlington House, Piccadilly (Banks & Barry); Dulwich College and Public Library; Institution of Civil Engineers, Great George Street, S.W.; Royal Gold Medallist 1877.

Jas. B. Waring, 1823–1875.—Engaged on the Architecture Courts of the Crystal Palace. Published *Architecture and Ornaments*, *Masterpieces of Ornamental Art*, 1857, *Architectural Art in Italy and Spain* (with Macquoid); thought himself a prophet.

R. J. Withers, 1823–1894.—Built good, cheap type of brick churches, erected with regard to style and public worship.

Thomas Knightley, 1823–1905.—Queen's Hall, Regent Street (with Phipps), a good acoustic building; Birkbeck Bank Buildings, Holborn, in florid glazed terra-cotta; hotels and the like.

John Norton, 1823–1904.—"Elvedon," for the Maharajah Dhuleep Singh, in W. Suffolk; International College, Isleworth; "Nutfield," Surrey; houses, Welbeck Street, and many churches.

Philip E. Masey, 1823–1897.—Partner with Norton; excellent writer on architectural subjects under the initials "P. E. M."; devoted to designing Flying Machines in the 'seventies.

W. H. Crossland.—Pupil of Sir Gilbert Scott; Rochdale Town Hall; Huddersfield Post Office; Royal Holloway Sanatorium and Royal Holloway College, Egham; "Akroydon," Halifax; Langley Hall, &c.

Francis Fowke, 1823–1865.—Capt. Royal Engineers; designed Sheepshanks Gallery with Redgrave; Museum of Science and Art, Edinburgh; enlarged Dublin National Gallery; erected Exhibition building, 1862; commenced South Kensington Museum permanent buildings, still standing (1911).

George Edmund Street, R.A., P.R.I.B.A. (1881), 1824–1881.—Pupil of Owen Carter, Winchester, 1841; Royal Courts of Justice; St. James-the-Less, Westminster; St. Mary Magdalen, Paddington; Crimean Memorial Church, Constantinople; American Church, Paris; Christ Church Cathedral, Dublin, restoration; Bristol and York Minster; Salisbury and Carlisle Cathedrals; Churches at Eastbourne, Bournemouth, Oxford, and Lille Cathedral 2nd Prize design; Sisterhood of All Saints, East Grinstead; Cuddesdon Church and Palace, Oxon.; Mansion, Cadogan Square; own house at Holmdale and Church adjoining, Surrey; contested Presidentship R.I.B.A., 1881; Royal Gold Medallist, 1874; *Brick and Marble Architecture of the Middle Ages in Italy*, 1855; *Gothic Architecture of Spain*, 1865; *Cathedral of Holy Trinity, Dublin*, 1862; designed Gilbert Scott Brass, Westminster Abbey; buried in the Abbey.

J. Dick Peddie, R.S.A., 1824–1901.—Queen Street Hall, University Club, and Royal Bank of Edinburgh; Telling room, Insurance Office, Glasgow; Aberdeen Public Buildings, and many mansions; Partner with C. G. H. Kinnear.

George Somers Clarke, 1825–1882.—Pupil of Sir Chas. Barry; Schools, Upper North Street, Brighton; Deaf and Dumb Institution, Kemp Town; "Wyfold Court," near Henley; Cowley Manor, Gloucestershire; Maresfield Rectory, Sussex; Merchant Seamen's Orphan Asylum, Snaresbrook; General Credit and Discount Company's premises, Lothbury, E.C.; worked on the Houses of Parliament drawings, which were published from his draughts.

James Brooks, 1825–1901.—Royal Gold Medallist 1895; St. John's, Holland Road, W. (not the west front, 1910); several notable churches: St. Michael's, Shoreditch; Plaistow, Stoke Newington, and East London; Hornsey Parish Church; design for Liverpool Cathedral, first competition; design Tonbridge School Chapel; stables in Mayfair, some houses and various churches in the provinces and elsewhere.

William White, F.S.A., 1825–1900.—Humewood, Wicklow; Churches at Battersea, Notting Hill, Lyndhurst, Bayswater, Farringdon Church, Exeter; Madagascar Cathedral; Pretoria Cathedral; many residences, excellent schools, parsonages and churches.

George Aitchison, R.A., P.R.I.B.A. (1896–9), 1825–1910.—Professor of Architecture at the R.A.; Decoration of Goldsmiths' Hall, E.C.; Marble work, side Chapel, Church of the Oratory, Brompton; Arab Hall, Lord Leighton's House, Kensington; Lord Leconfield's house decorations; in partnership with his father in Trinity Square, with work at the Docks;

friend of William Burges, A.R.A. Royal Gold Medallist 1898.

EDWARD LACY GARBETT.—*Elementary Principles of Design* (Weale's Series), 1850; a high-class book.

THOMAS WORTHINGTON, 1826–1909.—Manchester College, Oxford; Memorial Fountain, Bolton Abbey, to Lord Fredk. Cavendish; Infirmaries at Halifax, Wigan, &c.; Bath Hotel, Harrogate; many works in Manchester.

STEPHEN SALTER, 1826–1896.—Clever Sketcher of French Renaissance work; Belgrave Hospital, Kennington (Salter and Adams); Examination Hall, Physicians and Surgeons, Thames Embankment.

YEOVILLE THOMASON, 1826–1901.—Council House, Birmingham; Union Club, Colmore Row; Synagogue, Singer's Hill; Hotels and Offices.

S. J. NICHOLL, 1826–1905.—Pupil of Scoles; Prize Essay on brick-making, 1845; St. Francis' Church, Liverpool; Cox & Sons' Premises, Maiden Lane; R.C. Church at Chiswick (demolished).

J. P. SEDDON, 1827–1906.—Partner with Pritchard (worked with R. H. Gough and with Coates Carter); selected to submit design for Law Courts and Whitehall Public Offices; competed for Cork Cathedral; interested in Glass Mosaic, and faced walls of Sanctuary in Rochester Cathedral with same in foliations; Pulpit Gt. Yarmouth Church; erected Hotel, Aberystwyth, and converted it into a college; St. Paul's Church, Hammersmith; Hon. Sec. R.I.B.A. and of Royal Architectural Museum with Maurice B. Adams; friend of Wm. Burges. Voluminous writer and lecturer.

EDWARD SALOMON, 1827–1906.—Messrs. Agnew's Galleries, Bond Street, W., and at Liverpool; Reform Club and Prince's Theatre, Manchester.

WILLIAM BURGES, A.R.A., 1827–1881.—Pupil of Blore. "Knighthayes," Tiverton, Devon, 1869; Cork Cathedral and Cardiff Castle; First premiated designs for Lille Cathedral, and Church, Constantinople; Law Courts design of much beauty; design for Edinburgh Cathedral; fittings Worcester College Chapel, Oxford; selected to prepare scheme for the Decoration of St. Paul's Cathedral. (Models shown of this work at the Royal Academy; it was proposed to line Wren's work with marbles.) Hartford College, Connecticut; Houses at Cardiff and Kensington; Waltham Abbey Choir restoration; Model Lodgings, St. Anne's, Soho; Church, Studley Royal, Yorks. *Architectural Drawings of the Middle Ages*, 1887; *Art applied to Industry*.

GEO. FREDK. BODLEY, R.A., 1827–1907.—St. Michael's Church, Brighton (now enlarged by Chappell, who was with Burges); Churches, Hoar Cross, Kensington Gore, Brentford, &c.; Washington Cathedral and San Francisco Cathedral; School Board Offices, Thames Embankment (since enlarged for the L.C.C. by E. R. Robson and Col. Edis); Reredos and rood at St. Alban's, Holborn (after death of Butterfield); St. Paul's Cathedral Reredos with T. Garner, his partner; many colleges at Oxford and Cambridge; churches, mansions, and schools: published a book of Poems; designed memorial brass in Westminster Abbey over grave of G. E. Street; Royal Gold Medallist 1899.

WILLIAM HILL (Leeds), 1828–1888.—Portsmouth Town Hall (£100,000); Leeds Dispensary and Poor Law Offices.

ARTHUR CATES, 1828–1901.—Pupil of Smirke; premises in Piccadilly; Chambers, Middle Temple; Architect to H.M. Office of Woods; Educationalist and supporter of Institute; furthered scheme of Examination; founded "The Arthur Cates" Prize for Study of Architecture, 1902.

GEORGE T. ROBINSON, F.S.A., 1828–1897.—(Partner with Paull of Manchester); built Burslem Town Hall; Exchange, Wolverhampton; Art adviser to Burke & Co. and to Trollope & Co. A high-class writer on art and capable journalist; confined in Metz during Franco-German War.

SIR T. N. DEANE, R.H.A., 1828–1899.—(With Woodward.) Submitted design for the Law Courts, London, and for the Imperial Institute; built Museum at Oxford (Ruskin's scheme of carvings); Crown Life Insurance Offices in Fleet Street; Macarthur Hall, Belfast; Museum, Trinity College, Dublin, and Library, Christ Church College, Oxford; Portumna Castle; Church of Ireland Training College, Dublin; Tuam Cathedral, &c.

CAMPBELL DOUGLAS, 1828–1910.—Partner with James Sellars, *d.* 1888; partner with his pupil, J. J. Stevenson; Anderson's College; Medical Schools; Spiers School, Beith, Ayrshire; New Club, Glasgow; *Glasgow Herald* Buildings; Wylie and Lochhead Warehouses; Victoria Infirmary, Glasgow; Dysart Buildings, Fife; Ayr Town Hall; Scottish Amicable Insurance Offices, Glasgow; St. Andrew's Hall, Glasgow; Netherhall Largs Asylum.

GEORGE GOLDIE, 1829–1887.—(Goldie & Child.) Pro-Cathedral, Kensington; St. James's Church, Spanish Place (selected by James Fergusson); St. Wilfrid's Church, York; St. Mungo's, Glasgow; houses, convents and presbyteries.

J. T. WIMPERIS, 1829–1904.—Grafton Gallery; Messrs. Elkington's Premises, Regent Street; Mansions, Park Lane, and West End Premises in Bond Street.

Sir ARTHUR BLOMFIELD, A.R.A., 1829–1899.—Church House, Westminster; Sion College, Embankment; Bank of England, Fleet Street; completed the Law Courts; Church for the Blind, Oxford Street; Churches at Walmer, Marylebone, Great Marlborough Street, Wilton Road, &c.; Alterations, St. Peter's, Eaton Square; many mansions, colleges, restorations, and schools; Royal Gold Medallist 1891.

JOHN DOUGLAS (Chester), 1829–1911.—Banks, Insurance Offices, and premises in Chester; several mansions and houses for Duke of Westminster; Gladstone Memorial Library; new churches at Barmouth, and other places; restorations, &c. *Abbey Square Sketch Book*.

J. CHATWIN (Birmingham), 1829–1907.—Pupil of Sir Charles Barry; Lloyd's Bank, Lombard Street; Wolverhampton Art Gallery; chiefly church work.

H. SAXON SNELL, 1830–1904.—Pupil of Pennethorne; Infirmaries, Marylebone, St. George's, St. Olave's, and Holborn; Royal Victoria Hospital, Montreal; Royal Infirmaries, Hull and Aberdeen; published *Charitable and Parochial Establishments* and *Hospital Construction* (with Dr. Mouat); founded Saxon Snell Scholarship at R.I.B.A.

JAMES MURGATROYD, 1830–1895 (with Mills). Manchester Royal Exchange; Crumpsall Workhouse, and many offices and business premises in Lancashire.

T. M. LOCKWOOD, 1830–1900.—Law Courts, Chester; Town Hall, Whitchurch, Salop; Oswestry Municipal Buildings; premises, Eastgate Street, Watergate Row, Bridge Street Row, Chester; Congregational Chapel, Chester, and work for Duke of Westminster.

THOMAS HARRIS, 1830–1900.—"Victorian Harris." Buildings in Bond Street, Oxford Street; Mansion for Sir Titus Salt in Yorkshire; Mansion near Stokesay Castle, Salop; published *Victorian Architecture* (Bell & Daldy, 1860); *The Periods of English Architecture*, 1894 (Batsford); Batsford's shop, &c.

GEORGE TRUEFITT, 1830–1905.—St. George's Church, Tufnell Park; House, Rotten Row; Davyhulme Church, octagonal plan, 1867; Bank, Crouch End; houses in Sussex, &c.

CHAS. FORSTER HAYWARD, F.S.A., 1830–1905.—Duke of

Cornwall Hotel, Plymouth; houses in Mayfair; Tailors' Benevolent Institution, Haverstock Hill, "Druries," Harrow; Lambert and Butler's Premises, Drury Lane.

ALFRED WATERHOUSE, R.A., P.R.I.B.A. (1888–91), 1830–1905.—Competed for the Law Courts; built Assize Courts, Town Hall, and Owens College, Manchester; University, Liverpool; Eaton Hall, Cheshire; Natural History Museum, S. Kensington; Prudential Buildings, Holborn; Weigh House Chapel; Lime Street Hotel, Liverpool; Reading Town Hall; Bank, Lincoln's Inn; National Liberal Club; Colleges, Oxford and Cambridge; Hôtel Métropole, Brighton; premises Piccadilly, &c., &c.; Royal Gold Medallist 1878.

GEORGE CORSON (Leeds), 1830–1910.—Municipal Buildings, Library, and School Board Offices, Leeds, £100,000; First premiated design, Glasgow Municipal Buildings; banks, offices, houses, Leeds; schools, &c.

THOMAS BLASHILL, 1830–1905.—Superintending Architect L.C.C. (and Metropolitan Board of Works); Trübner's premises, Ludgate Hill, and some church work; Educationalist and writer on practical and archæological subjects; furthered foreign travel for students.

EDWARD M. BARRY, R.A., 1830–1880.—Design for the Law Courts judged the best plan; proposed joint architect with Street, given National Gallery in lieu thereof and added some galleries at rear; Halifax Town Hall; Charing Cross and Cannon Street Station Hotels; buildings in Middle Temple, E.C.; Art Union premises, Strand; Schools, Endell Street, W.C.; Mansions in Sussex, &c., &c.; Lectures as Professor of Architecture before the Royal Academy issued in book form, 1881.

C. WICKES.—*Illustrations of the Spires of the Mediæval Churches of England*, folio, 1853–59.

CHARLES LOCKE EASTLAKE, 1832–1906.—Articled to P. Hardwick, R.A., Secretary R.I.B.A. 1866 to 1878, resigned to take Keepership of National Gallery. Wm. Henry White succeeded him at the Institute. Published *History of the Gothic Revival*, 1872; *Hints on Household Taste*, 1872; Guide books to the Louvre, Paris, and the Brera Gallery, Milan; contributor to the *Building News* for many years.

J. S. CROWTHER, 1832–1893.—Bowman and Crowther's *Churches of the Middle Ages*, 1855; Architect to Manchester Cathedral; Church of St. Mary, Moss Lane, Hulme, 1858; St. Alban's, Waterlow Road, Manchester, 1874, and others.

R. J. JOHNSON, 1832–1892.—Durham College of Science; architect, Cathedral of St. Nicholas, Newcastle; All Saints', Gosforth; two churches in Newcastle, and many others. Barnard Castle Schools, "Pendover," "Upsall Hall," "Kirklevington," Banks and Insurance Offices; published *Specimens of Early French Architecture* (partner with Mr. Hicks).

JOHN J. STEVENSON, F.S.A., 1832–1908.—Pupil of David Bryce and Sir G. G. Scott; "Red House," Bayswater; Kensington Court, and houses, Melbury Road, W., Hampstead, Oxford, Chelsea, Exhibition Road, S.W.; churches, Crieff and Perth; University Laboratory and Christ Church College Buildings, Cambridge; Sedgwick Memorial of Geology; Premises, Fenchurch Street, E.C., and at Glasgow; London School Board Schools; *House Architecture*, 2 vols., 1880; Paper at Institute, *Architectural Restoration*, 1877; answered by Sir G. Scott.

W. M. FAWCETT, M.A., F.S.A., 1833–1909.—Competed for Cork Cathedral; built additions to King's, Queen's, Peterhouse and Emanuel Colleges, Cambridge; Cavendish Museum; Cambridge County Gaol; Anatomy Schools, Cambridge and Guildhall; Women's Hostel; many churches, &c.; mansions in Ireland and elsewhere.

Prof. ROGER SMITH, 1833–1903.—Educationalist; built schools and chapels; edited the *Architect* for a short time; *History of Architecture* (conjointly with Mr. John Slater).

EDWARD W. GODWIN, F.S.A., 1833–1886.—Partner with Crisp, of Bristol; built Congleton and Northampton Town Halls; Dromore Castle; Glenbigh Towers; Dingle Bay, Kerry; buildings at Castle Ashby; Plymouth Municipal Buildings (consulting architect with Hine and Odgers); design with Col. Edis for the Berlin Houses of Parliament; won first Premium, Leicester Town Hall Competition; houses, Northampton; Parsonage, Moor Green; houses at Bedford Park; Whistler's House, Tite Street, Chelsea; furniture, Japanese art adapter; costumes and theatrical decorator; excellent writer on Art; published *Temple Bar*, illustrated, 1877, and *Art in the Conservatory* (with Maurice B. Adams); friend of Wm. Burges.

F. P. COCKERELL, 1833–1878.—Hon. Sec. R.I.B.A. Freemasons' Hall and Tavern; Art Gallery, Pall Mall; many country houses, and good detail; pupil of Hardwick.

E. WELBY PUGIN, 1834–1875.—Queenstown Cathedral (with his pupil, G. C. Ashlin, R.H.A.); St. Peter's Church, Cork; All Saints', Stourbridge, 1863, and many other churches, with monastic buildings; engaged with Herbert in litigation.

WILLIAM MORRIS, 1834–1896.—Decorator, poet, and art furnisher; writer and printer; Pupil of G. E. Street.

W. EDEN NESFIELD, 1835–1888.—Pupil of W. Burn and Salvin; partner with Mr. Norman Shaw; published *Specimens of Mediæval Architecture*, 1862 (lithographed by Newman); Cloverley Hall; Bank, Saffron Walden; Combe Abbey, Coventry, for the Earl of Craven; several schools; lodges at Kew Gardens and Regent's Park, N.W., and other houses.

E. G. BRUTON (Oxford).—Banbury Town Hall, and buildings in and round Oxford.

C. J. PHIPPS, F.S.A., 1835–1897.—"Star and Garter," Richmond; His Majesty's Theatre, Haymarket, and many theatres in England, Scotland and Ireland; Leinster Hall, Dublin; R.I.B.A. premises.

BASSETT KEELING, 1836–1886.—"Strand Music Hall"; Auction Mart Restaurant, Tokenhouse Buildings; "Whilome"; churches at Campden Hill Square and Green Hill, Harrow; made cemetery chapels a speciality and won many competitions for same; cultivated the "Victorian" style.

H. W. BREWER, 1836–1903.—Architectural artist and illustrator; lecturer and archæological writer; many ideal restorations published in the *Builder*, in bird's-eye views of London, Oxford, &c.; historic sketches, organs and galleries.

HENRY SPALDING, 1836–1910.—Partner with Mr. A. W. S. Cross, M.A.; Mount Vernon Hospital, Fitzroy Square; Manchester School of Technology; Baths, Hampstead, Camberwell, Dulwich, Shoreditch and Coventry; Swanley Home for Boys; Manchester Industrial Dwellings.

C. E. KEMPE, 1837–1907.—Connected with Kemp Town, Brighton; stained glass designer; examples at St. Paul's Cathedral; Ledbury Church; Pembroke College Chapel, Oxford; Petworth Church, Sussex; lived in a beautiful 15th-century house, Lindfield; designed ecclesiastical embroidery, &c.

THOMAS VERITY, 1837–1891.—"Criterion" Restaurant (won in open competition); Scarborough Spa Saloons; Nottingham Municipal Buildings; Kensington Public Baths; several theatres; placed second in the New Admiralty Offices Competition with his partner, Mr. G. H. Hunt; Verity detailed the Albert Hall for General Scott.

Sir THOMAS DREW, R.H.A., P.R.H.A., 1837–1910.—erected Belfast Cathedral; continued the work of G. E.

Street, Christ Church Cathedral, Dublin; competed for Queen Victoria Memorial, and was the only competitor who proposed to refront Buckingham Palace as part of the scheme; Banks, Insurance Offices; many restorations and churches.

JOHN DANDO SEDDING, 1838–1891.—Holy Trinity Church, Sloane Street; churches, Clerkenwell, Highgate, Boscombe, Ealing, Falmouth, Netley, and elsewhere; Children's Hospital, St. Michael's, Shoreditch; houses for Col. Wynch Knole, Dunster, and Mr. Ed. Christie, Bournemouth; Clergy House, Plymouth; book on *Garden Craft*; designed wall papers and fabrics.

GEORGE GILBERT SCOTT, M.A., 1839–1897.—Son of Sir Gilbert Scott; Church of St. Agnes, Kennington, S.E., 1877; St. John's Church, Norwich, for Duke of Norfolk; College additions and buildings, Oxford and Cambridge; Church of All Hallows, Southwark; published *English Church Architecture*, 1881.

THOMAS GARNER, 1839–1906.—St. Paul's Cathedral Reredos; New wing Magdalen College, Oxford; Church at Harrow; restored Fritwell Manor, Banbury, where he lived; many years partner with G. F. Bodley, R.A.; Choir to the Chapel, Downside Abbey, Bath, 1902; *Domestic Architecture of the Tudor Period*, by Thos. Garner and Arthur Stratton, 1910.

ALFRED DARBYSHIRE, 1839–1908.—Pupil of Bowman and Crowther; Market for Baroness Burdett-Coutts; much work in Manchester; Victoria Fountain, Victoria Park; Theatre work and business premises.

J. F. BENTLEY, 1839–1902.—Pupil of Henry Clutton; Roman Catholic Cathedral, Westminster; Jesuit College, Beaumont, Windsor; St. Thomas' Seminary, Hammersmith; churches: Penshurst; St. Mary's Chelsea; St. Francis', Notting Hill; Holyrood, Watford; St. Mary's, Bayswater; Corpus Christi, Brixton Rise; Schools and Convent, Clapham; Chapel to St. John's Church, Hammersmith.

J. M. BRYDON, 1840–1901.—Design for Kensington Town Hall rejected and Robert Walker's chosen; built St. Peter's Hospital, Covent Garden; Women's Hospital, Euston Road; Vestry Hall and Library, Chelsea; Town Hall, Taunton; Chapel at W. Kensington (with Mr. W. Cubitt); London School of Medicine, 1897; Municipal Buildings at Bath; Government Offices, Whitehall, and Great George Street, S.W., superintended after Brydon's death by Sir Henry Tanner, H.M. Office of Works; built several houses and studios at home and abroad.

C. J. FERGUSON, F.S.A., 1840–1904.—Buildings Aberystwith College and Library; Bamborough Castle for Lord Armstrong; Naworth and Muncaster Castle additions; Tullie House, Carlisle; Library, and conversion Town Hall, Carlisle.

C. HODSON FOWLER, F.S.A., 1840–1910.—Architect to Durham Cathedral and Rochester Cathedral; churches, Norton, Yorks, and Notting Hill, &c. &c.; Durham University College restoration and new Chapel; Consulting Architect, Lincoln Minster; many restorations.

HORACE GUNDRY, 1841–1900.—Cook's premises, Ludgate Circus; warehouse, Fetter Lane; country houses and other original work.

E. J. TARVER, 1841–1891.—Wadhurst Park, Sussex; All Souls' Church, Harlesden, 1879 (octagonal nave); St. Peter's, Tyringham; Hooton Chapel; Mausoleum, Rossmore; No. 11 Kensington Palace Gardens; Hunting Box, Ardennes; "Colthurst" additions, and at Parkfield, Hallow. *Mediæval Costume*, 1873 (with H. W. Lonsdale).

R. HERBERT CARPENTER, 1841–1893.—Design for Cathedral at Manchester; Lancing and Hurstpierpoint Colleges; Lantern St. Paul's Church, Brighton; Fisherman's Church, with nave below the street level, rear of St. Paul's at Brighton, for Rev. Arthur Wagner; supporter of Royal Architectural Museum; partner with Mr. B. Ingelow.

F. W. ROPER, 1841–1911.—Rous Memorial, Newmarket; 95 Piccadilly; mansion, Scarborough; Arundel Buildings, Shaftesbury Avenue; Winkfield Lodge; Schools, Great Hunter Street, Ashford, Kingston, Hove; and Holy Trinity, Chelsea; Ilford Hospital. Large private connection with other architects.

BARROW, EMMANUEL, M.A., 1841–1904.—(Davis & Emmanuel.) City of London Schools, Thames Embankment; Garden House, Throgmorton Avenue; Salisbury House, Finsbury Pavement; Meistersingers' Club, St. James's Street; Hampstead Synagogue; Yarrow Convalescent Home, Broadstairs; Kidderpore Estate, Hampstead.

GEORGE H. BIRCH, F.S.A., 1842–1904.—*London City Churches of the XVII. and XVIII. Centuries*, 1896; "Old London" at the Healtheries Exhibition, South Kensington; Curator, Soane Museum; pupil and assistant to Ewan Christian.

J. T. MICKLETHWAITE, F.S.A., 1843–1906.—Pupil of Sir Gilbert Scott. *Annals of Westminster Abbey*, 1898; *Modern Parish Churches*; Architect to Westminster Abbey; partner with Mr. Somers Clarke, F.S.A.

GEO. FREETH ROPER, 1843–1892.—Design for Edinburgh Cathedral, with Alexander Ross of Inverness; helped Mr. E. C. Robins, F.S.A., and worked with E. W. Godwin; later practised in Manchester as partner (Bell and Roper); excellent designer.

WILLIAM YOUNG, 1843–1900.—War Office, Whitehall; Glasgow Municipal Buildings; Earl Cadogan's Mansion, Chelsea House, Knightsbridge; Viscount Bury's Mansion, Cadogan Square; Holmewood House, Hants; Gosforth House, cortile and staircase; Chevening Hall, Kent; Oxhey Grange, Herts. Published *Town and Country Mansions*, 1880.

F. C. DESHON, 1844–1877.—Pupil of Street; exceptionally good draughtsman; Spire and Tower, East Tynemouth Church, 1877; published many beautiful sketches of buildings.

GEORGE SHERRIN, 1843–1909.—Outer dome over Gribble's inner dome, Oratory, Brompton; Church, Moorfields; Ponting's premises, High Street, Kensington; Moorgate Station Buildings; Offices, Cannon Street, E.C.; City Banks and country churches; Seaside Hotels; designed Brown's ornamental bricks, much used for diapers, &c., about 1875.

ALFRED BICKERDIKE, 1844–1900.—Assisted Sir Gilbert Scott; designed Christ Church, Westminster Bridge Road, for Newman Hall (spire built by Americans), cost £50,000; illustrated by Bickerdike's drawings, *Building News*, Jan. 1 and April 9, 1875 (Paull & Bickerdike); went to Office of Works subsequently.

E. B. FERREY, F.S.A., 1845–1900.—Church of Holy Trinity, Stroud Green; Duke of Connaught's Mansion, Bagshot Park; illustrated Old St. Paul's by a restoration set of drawings in *Three Cathedrals of St. Paul*, by W. Longman.

R. S. WORNUM, 1846–1910.—Tylney Hall, Herts; Residential Flats, Bow Street, W.C.; House, Santander, Spain, and good domestic work elsewhere.

JAMES SELLARS, 1846–1888.—Partner with Campbell Douglas; first work, Fountain, West End Park, Glasgow; designed International Exhibition, Glasgow, 1881 (a very fine work and best of the three exhibitions); New Club, Glasgow; Scottish Amicable Insurance Building and several churches.

E. C. LEE, 1847–1890.—St. Mary's, Whitechapel; South Weald Hall, Brentwood, for Octavius Cope, M.P.; made fine design for Library in the Temple, E.C. Pupil of William Burges.

Sir JOHN TAYLOR, K.C.B., 1833–1912.—Central Hall and Stairways National Gallery; supervised new War Office with Mr. Clyde Young after death of William

Young; Record Office extensions, Chancery Lane; Bankruptcy Buildings, Lincoln's Inn; Chief Architect H.M. Office of Works.

J. E. C. Streatfeild, 1847–1910.—Pupil of Sir Arthur Blomfield; All Saints' Church, Eastbourne; Moreton Almshouses, Westerham; restored Westerham Church, and did capable domestic work with taste.

John Kelly, 1847–1904.—(Adams & Kelly.) Leeds School Board Schools; church, Petersham, 1903; All Saints' Church, Acton; churches, Soho Square and Chiswick; designed R.C. Church for Spanish Place in competition.

Herbert Gribble, 1847–1894.—Brompton Oratory, won in competition; helped Jos. Hansom with St. Philip Neri, Arundel, and Church of the Holy Name, Manchester; fine draughtsman and clever designer.

Francis W. Tasker, 1848–1904.—Hostel next Northampton Cathedral (built by Pugin); Church, Millwall; Countess Tasker's Mansion, Brentwood; Hostel, St. Joseph's Church, Highgate; St. Charles's Schools, Notting Hill.

Richard Coad.—Assistant to Sir Gilbert Scott; built Cox and Biddulph's Bank (1874), Parliament Street, S.W.: clever front.

W. J. Hicks, 1849–1902.—Partner with R. J. Johnson: Church of St. Hilda, Sunderland, 1887; Barnard Castle and School; many other works (also partner with Charlewood).

James Neale, F.S.A., 1851–1909.—Monograph of St. Albans Abbey; St. Peter's Church, Bushey Heath, and Noakes Memorial Pulpit; Houses at Hampstead, with G. E. Street.

Col. Eustace J. A. Balfour, 1854–1911.—(Balfour & Turner.) St. Anselm's Church, Davies Street, W.; Charlewood, E. Grinstead; Alf. Beit's Mansion, Park Lane; houses in Brook Street and Balfour Place; Chapel, Hatfield Park; Ampton Hall, W. Suffolk; Scottish Church, Crown Court, Covent Garden.

A. H. Tiltman, 1854–1910.—Islington Public Baths; Lambeth Baths; Second Premium, Glasgow Royal Infirmary; Higher Grade School, Acton; Eastern District Hospital, Glasgow; Grove Fever Hospital, £250,000; many baths and washhouses.

E. W. Mountford, 1856–1908.—New Sessions House, Old Bailey, E.C.; Sheffield Town Hall; Lancaster Town Hall; Municipal Buildings, Wandsworth, and Library, Wandsworth; Battersea Polytechnic Institute; Northampton Institute, Clerkenwell; Art Galleries, Liverpool; churches, Clapham and elsewhere; many houses and other buildings.

H. Nicholas Hawke, I.S.O., 1862–1911.—H.M. Office of Works; new Galleries, west end of National Gallery, 1910; County Court, St. Martin's Lane; designed new Offices Board of Agriculture, Whitehall Place, S.W.; the Melting House, Royal Mint; Patent Office extensions; County Courts, Croydon, Swansea, and Cardiff; Southampton Custom House and Post Office.

Honours and Appointments.

The King has been pleased to confer the honour of Knighthood upon Mr. Frank W. Wills, Lord Mayor of Bristol. Sir Frank was elected a Fellow of the Institute in 1900 and has served on the Council.

Mr. John W. Simpson [*F.*] has been elected "Membre Correspondant" of the Société Centrale des Architectes Français—a distinction, it may be mentioned, enjoyed by only three other British architects.

Mr. John Bilson, F.S.A. [*F.*], has been elected Honorary Corresponding Member of the Société Nationale des Antiquaires de France.

Count Plunkett [*Hon. A.*] has been elected President of the Royal Society of Antiquaries of Ireland.

THE EXAMINATIONS.

The Preliminary.

The Preliminary Examination, qualifying for registration as Probationer R.I.B.A., was held in London and the provincial centres indicated below on the 10th and 11th June. Of the 171 candidates admitted, 49 were exempted from sitting, and the remaining 122 examined, with the following results:—

Centre	Number Examined	Passed	Relegated
London	64	39	25
Birmingham	7	4	3
Cardiff	8	3	5
Glasgow	6	6	0
Leeds	12	11	1
Manchester	20	15	5
Newcastle	5	3	2
	122	81	41

The passed candidates, with those exempted, making a total of 130, are as follows:—

ADDISON: Joseph; 169 Grampian Road, Aberdeen.
ALLEN: Gilbert Drake Pont; 7 Montague Road, Cambridge.
ARMSTRONG: John Ramsay; 11 Marchmont Road, Edinburgh.
ASHBY: Leslie John; 308 Mansfield Rd., Nottingham.
ATALLA: Mohammed Ali; King's College, London.
BAGSHAW: Arthur Samuel; 72 Drakefell Road, New Cross, S.E.
BARNETT: Percy William; 64 Effingham Road, Hornsey, N.
BATSTONE: Percy; 109 Manor Park, Lee, Kent.
BEIRNSTEIN: Percy Vivian; 18 Redcliffe Gardens, South Kensington.
BENNETT: Gordon George; 29 Lewin Road, Streatham, S.W.
BENSON: Horace Archibald; 87 Grosvenor Road, Aldershot, Hants.
BETHEL: Frederick George; The Promenade Studio, Douglas, Isle of Man.
BETHELL: Cyril Claude; Jersey House, Bush Hill Park, N.
BLAKE: James Robert; 14 The Lees, Malvern.
BRIDGE: Thomas Moss; 31 Park Road, Manchester.
BROWN: John Boyce; 47 Victoria Rd. North, Southsea.
CALDER: Charles Shaw Tyrie; c/o Mrs. Kay, 51 Broughton Street, Edinburgh.
CARD: Raymond William George; Bournbrook, Birmingham.
CARTER: Bernard Purvis; 16 All Saints' Road, St. Anne's-on-Sea, Lancs.
CHAPMAN: Kenric Jell; Ryseden, Sanderstead, Surrey.
CHARDIN: Richard Edward; 11 Empress Avenue, Woodford Green, Essex.
CLAMP: Ernest Edward; 93 Pepys' Road, New Cross, S.E.
CLARK: George Geoffrey; South Holme, Seaton Carew, Co. Durham.
COTTINGHAM: Garnet Reginald; 37 Vernham Road, Plumstead, Woolwich, S.E.
CRUICKSHANK: Donald Edward; Guyscliffe, High Barnet.
CUNNELL: Donald Charles; 16 Mount Pleasant, Norwich.
DAS: Manmatha Nath; 56 Goddington Road, Strood, Rochester.
DE: Debendranath; 23 Mornington Road, N.W.

DE KELSBY : Bertram; 3 Stanley Road; Heaton Moor, Stockport.
DERRY : Douglas Charles Lawford; 62 Redington Road, Hampstead, N.W.
DOUGILL : Wesley; Wensleydale House, Otley Road, Bradford, Yorks.
DRANSFIELD : Norman William; 13 Fern Street, Birkby, Huddersfield.
DUNCAN : Thomas Victor; St. John's Road, Knutsford, Cheshire.
DURLACHER : Philip Alfred, 5 Lancaster Gate Terrace, W.
EDWARDS : Charles Robert; 21 Broom Road, Hale, Cheshire.
ELLIOTT : Frank Tomes; 23 Warwick Street, Pimlico.
EWENS : Sydney Russell; 171 Holly Road, Handsworth, Birmingham.
FORD : Lawton Stephen; "Heatherland," Fairmile Avenue, Cobham, Surrey.
FORD : Thomas Francis; 36 Hanover Park, Peckham, S.E.
FRANCIS : Bernard Thomas; High Cross Street, St. Austell, Cornwall.
FRANCIS : David Herbert; "Maes-y-ffrwd," The Grove, Merthyr Tydfil.
FRASER : Tom Owen; 119 Fortess Road, Kentish Town, N.W.
GARDINER : Frederick George Ernest; "Redcliffe," Oldfield Park, Bath.
GARNER : Philip Thomas; 102 Baxter Avenue, Southend-on-Sea.
GLOVER : Dennis Shirley; 56 Thurleigh Road, Wandsworth Common, S.W.
GOODER : Francis Eric; Hurman Street, Karori, Wellington, N.Z.
GOODWIN : Norman William; 13 Blenheim Gardens, Cricklewood, N.W.
GORDON : Joseph Davison; 1 Conway Square, Newtownards, co. Down, Ireland.
GREEN : Oswald Howell; Lostwithiel, Cornwall.
HANSON : James Walter; 78 King St., South Shields.
HART : Hyla Gadgham; 3 Cherry Tree Avenue, Dover.
HELLIWELL : Henry Cartwright; 197 Great Cheetham Street, W., Hr. Broughton, Manchester.
HEWITT : Arthur Kidman; 3 Albany Road, South Town, Great Yarmouth.
HODSON : Cecil Padgett; 45 Sylvan Avenue, Bowes Park, N.
HOOPER : Arnold Fielder; Kelsey Corner, Beckenham.
HOSAIN : Syed Iflikhar; 47 Nelson Street, Oxford Road, Manchester.
HOWELL : Harold. John; Welbeck Road, Bolsover, Chesterfield.
HOWELS : Frank Edward; 32 Savernake Road, Hampstead, N.W.
HUGHES : John Griffiths; Mwyn-Bwll, Hendre, Mold.
ILLINGWORTH : Arthur John Alexander; 16 Radnor Drive, Liscard, Cheshire.
JACKSON : Reginald; 35 Commercial Street, Scarborough.
JACKSON : Waldegrave; The Hollies, Priest Hill, Caversham, Reading.
JENNINGS : Thomas Howard; 67 Dartmouth Park Hill, N.W.
KASSEM : Hussein Zaki; 17 Egerton Road, Fallowfield, Manchester.
KEITH : John Lucien; 25 Rosslyn Hill, Hampstead, N.W.
KINNA : "Kenmure; 40 Bignor Street, Cheetham, Manchester.
KNIGHT : Douglas Edward : 29 Millicent Road, West Bridgford, Notts.
LAWSON : John Scott; Castle Blair Park, Dunfermline, Fife.
LEADAM : Evelyn Grahame Seaton; 25 Nevern Square, S.W.
LEE : Stanley; 14 Ash Grove, Newland, Hull.
LLEWELLYN : Thomas Elvet Ernest; Colliers' Arms Hotel, Garth Mountain, Taffs Well, Cardiff.
MACKERETH : Edward George; "The Garth," Pennybridge, near Ulverston, Lancs.
McLEAN : James Monteith; 2 Alexandria Place, Calside, Paisley, N.B.
MARGERISON : William Joseph; Chestnut Grove, Calverley, near Leeds.
MARTIN : Joseph Parnell; 1 Vaughan Avenue, Goldhawk Road, N.
MATTHEWS : Henry; 92 Spring Garden Road, Longton, Stoke-on-Trent.
MAY : Thomas William Vivian; 24 Gladwell Road, Stroud Green, N.
MAYNARD : Arthur; 111 Henderson Street, Levenshulme, Manchester.
MELHUISH : John Barradale; "Woodbrook," Groby Road, near Leicester.
MIDDLETON : Lucy Muriel; 58 Dafforne Road, Upper Tooting, S.W.
MILLER : Walter Amos; High Rd., East Finchley, N.
MORRIS : Percy; Borough Engineer's Office, Town Hall, Nelson, Lancs.
MULLINS : Geoffrey Thomas; "Shirley," West Heath Avenue, Hampstead, N.W.
NEWRICK : Frederick Hubert; 6 St. Bede's Terrace, Sunderland.
NIXON : Kenneth Bevan; Hope Range, Davenport, Stockport.
OSBORNE : Cyril Charles George; 95 Hankinson Road, Winton, Bournemouth.
OWEN : George Eustace; The Vicarage, Orford, near Warrington.
PAPWORTH : Frederic Cyril; Gaul Road, March.
PATERSON : Henry Franklin; 10 Beaufort Road, Broomhill, Sheffield.
PAXTON : Norval Rowallan; 2 Crossflat Terrace, Glasgow Road, Paisley.
PHIPPEN : Henry George; 2 Leigh Road, Clifton, Bristol.
PICTON : Clarence Spencer; 73 St. Donatt's Road, New Cross, S.E.
PULLAN : Bernard Strachan; 1 Devonshire Place, Harrogate.
PURVIS : Arthur Frederic; 20 Victoria Square, S.W.
RAHMAN : Fazalur; Engineering Department, Liverpool University, Liverpool.
RAYSON : Alexander Arnold; 25 Belsize Avenue, Hampstead, N.W.
REED : William James; 11 Theresa Street, Blaydon-on-Tyne.
RICKATSON : John; Market Place, Market Weighton.
ROBERTS : Hugh; 87 Gladstone Terrace, Bangor, N. Wales.
ROBERTS : Walter Leslie; 388 Stockport Road, Bredbury, near Stockport.
ROBERTSON : David; 53 Airlie Gardens, Hyndland, Glasgow.
ROBERTSON : Robert; Limelands Terrace, Caldercruix, N.B.
ROFF : Oscar Alan; "Montrose House," 157 Chesterton Road, Cambridge.
SCHUMANN : Carl Ludwig Georg John; 8 West View, Highgate Hill.
SHATTOCK : Lawrence Henry; 4 Crescent Road, Wimbledon, Surrey.
SHAW : Francis Leslie; St. Helier's, The Park, Hull.
SHEWIN : Mary; 10K Hyde Park Mansions, N.W.
SHIELDS : George; 258 Otley Road, Bradford.
SMITH : Charles William; Broadway, Bourn, Cambridge.

SOORMA : Teja Singh; 16 Prescot Drive, Newsham Park, Liverpool.
SPENCE : Andrew Tebbutt; 65 Union Road, Clapham, S.W.
STEEDMAN : James Alexander; 72 Morningside Drive, Edinburgh.
STEPHENS : Philomorus Edwin; "Dock Villa," Chapel Street, Penzance.
STUART : Charles, jun.; 7 Thistle Street, Kirkcaldy, Fifeshire.
TANNER : Stanley Thomas; 134 Llandaff Road, Canton, Cardiff.
TATTERSHALL : Edward William; "Melbrook," Cambridge Road, Hale, Cheshire.
TAYLOR : Clarence; Fir Bank, Green Lane, Dronfield, near Sheffield.
TODD : Harold Edgar; 7 Elmdale Road, Clifton, Bristol.
UHRMACHER : Solomon; 10 Wilton Road, Dalston, N.E.
VALDER : William Edward; Beechwood, Croham Park Avenue, Croydon.
VERGETTE : Robert George; 7 Walter Road, Swansea.
VON BERG : Wilfred Clement; The Beeches, St. Augustine's Avenue, S. Croydon.
WAKERLEY : Arthur John; "Sykefield," Westcotes Drive, Leicester.
WAPLE : Frank Harold; 151 Mount View Road, Stroud Green, N.
WARD : James Patrick; 2 Inver Avenue, Belfast.
WARWICK : James Guy; 103 Park Road, Peterborough.
WILLIAMS : Leo John; "Branksome," Mennaye Road, Penzance.
WOODGATE : James Austen; 69 Vale Road, Ramsgate.
WOODHOUSE : Francis Percy Mark; Southmead, Wimbledon Park, S.W.
YOUNG : William Watson; Gaswork House, Arbroath.

The Intermediate.

The Intermediate Examination, qualifying for registration as Student R.I.B.A., was held in London and the undermentioned provincial centres on the 10th, 11th, 13th, and 14th June. One hundred and nineteen candidates were examined, with the following results :—

Centre	Number Examined	Passed	Relegated
London	82	42	40
Cardiff	5	4	1
Glasgow	4	2	2
Leeds	8	4	4
Manchester	15	4	11
Newcastle	5	2	3
	119	58	61

The passed candidates are as follows, their names being given in order of merit as placed by the Board of Examiners :—

FOALE : William Ernest [*P.* 1911]; 29 Aldridge Road Villas, W.
ROGERS : John Charles [*P.* 1906]; 1 Cumberland Terrace, Lloyd Square, W.C.
WILSHERE : Reginald Sharman [*P.*]; 37 Adolphus Road, Finsbury Park, N.
SHUFFREY : Gilbert [*P.* 1910]; Thorncote, Edgehill Road, Ealing, W.
KALTENBACH : Albert Frederick [*P.* 1907]; Hillside Lawn, 70 Hornsey Lane, N.
ROLLEY : Horace Edwin [*P.* 1904]; 28 Finboro' Road, S. Kensington.
TOYE : Frederick Charles Langrish [*P.* 1907]; 17 Woodside Road, Wood Green, N.
ALISON : Walter [*P.* 1909]; c/o Blackstock, 15 Willowbank Street, Glasgow.
RUBERY : Samuel [*P.* 1910]; 49 Lonsdale Road, Wolverhampton.
ATCHISON : Harold Percy Reynolds [*P.* 1908]; 12 Redcliffe Street, South Kensington.
MARTYN : Egerton Alwyn Lawer [*P.* 1911]; Brynhyfryd, Albany Road, Redruth.
HORSBURGH : Arthur Lindsay [*P.* 1909]; c/o Harry Redfern, Esq., 5 Bedford Row, W.C.
MACPHERSON : John [*P.* 1910]; Magdala Road, Nottingham.
DURNFORD : William John [*P.* 1906]; 51 Chesterton Road, N. Kensington, W.
THOMPSON : James Osbert [*P.* 1901]; 135 Blair Athol Road, Ecclesall, Sheffield.
PRYNNE : Sherard John Howard [*P.* 1907]; 40 Gunterstone Road, West Kensington, W.
PARKES : Edgar Mainwaring [*P.* 1909]; 180 London Road, Northwich.
FOSTER : William Sydney [*P.* 1905]; 60 Pevensey Road, Eastbourne.
FARRER : John Camplin [*P.* 1911]; 2 Coleman Street, E.C.
GRAY : George Hall [*P.* 1908]; "Belmont," Preston Avenue, North Shields.
LAWTON : William Victor [*P.* 1909]; Castle Cliffe, Knaresborough.
WHITEHEAD : Percy [*P.* 1908]; c/o Mrs. Carlisle, 26 Bondgate Without, Alnwick.
CRUICKSHANK : Donald Edward [*P.*]; Guyscliffe, High Barnet.
JAMES : Charles Holloway [*P.* 1909]; Y.M.C.A., Cardiff.
WOODHOUSE : Cecil Herbert Mackay [*P.* 1908]; The Old Hall, Queniborough, near Leicester.
KNIGHT : Walter John [*P.* 1909]; Y.M.C.A., Queen Street, Cardiff.
KERSEY : Arthur Oliver [*P.* 1910]; Bridge House, St. Beolings, Suffolk.
PURVIS : Arthur Frederic [*P.* 1912]; 20 Victoria Square, S.W.
ARNOLD : Raymond Charles [*P.* 1908]; 49 Thorold Road, Ilford, Essex.
STONER : Arthur Philip [*P.* 1910]; 90 Kingsley Road, Northampton.
CHILD : Ernest Henry [*P.* 1910]; 18 Denning Road, Hampstead, N.W.
SKELDING : Percy [*P.* 1911]; 186 Coldharbour Road, Bristol.
ELSWORTH : Lancelot Andrew [*P.* 1908]; 139 Victoria Road, Headingley, Leeds.
NISBET : Alec [*P.* 1910]; 8 Westbank Place, Portobello, N.B.
BAIN : Victor [*P.* 1905]; 24 Upper Bedford Place, W.C.
BARRY : Caryl Arthur Ransome [*P.* 1910]; Parliament Mansions, Victoria Street, Westminster.
BIRNSTINGL : Harry Joseph [*P.* 1907]; 5 Pembroke Gardens, Kensington, W.
BLYTH : Charles Kydd [*P.* 1910]; 27 Grange Road, Canonbury, N.
BROAD : Malcolm Charles [*P.* 1908]; 13 Albemarle Street, W.
CLARE : Alfred Douglas [*P.* 1907]; 11 Gordon Street, Gordon Square, W.C.
CROSSLAND : Harry Ewart [*P.* 1909]; Station Road, Sutton-in-Ashfield, Notts.
EDWARDS : John Ralph [*P.* 1910]; c/o Messrs. Oatley & Lawrence, 25 Orchard Street, Bristol.

EDWARDS : Kenneth Drew [*P.* 1907]; Thornton, Thurlow Park, Torquay.
FERNYHOUGH : Samuel, jun. [*P.* 1907]; Knowles House, Handforth, Cheshire.
GOODWIN : Harry Thomas [*P.* 1907]; 39 Granville Park, Blackheath.
INMAN : Gordon Henry Nisbet [*P.* 1909]; c/o W. Campbell Jones, Esq., Skinners' Hall, 9 Dowgate Hill, E.C.
MAYNARD : Frederick James [*P.* 1909]; 166 Hainault Road, Leytonstone, Essex.
MITCHELL : Andrew [*P.* 1909]; 1 Oakley Crescent, City Road, E.C.
MOSSE : Philip Godfrey [*P.* 1908]; "The Lodge," Strawberry Hill, Middlesex.
RIPLEY : Cedric Gurney [*P.* 1909]; 19 Victoria Square, W.C.
SMITH : Henry [*P.* 1907]; 129 Pleasant View, Haslingden Old Road, Rawtenstall, near Manchester.
SOPER : Stanley George [*P.* 1909]; 208 Lewisham High Road, Brockley, S.E.
SPARROW : Arthur John [*P.* 1907]; Ardencaple, Leamington.
STEVENS : Frederic J. [*P.*]; St. Paul's School, Wellclose Square, E.
STOTT : Alfred Edgar [*P.* 1910]; 16 Lynwood Road, Rice Lane, Liverpool.
SWALLOW : Joseph Cedric [*P.* 1911]; The Cottage, Croft Road, Letchworth, Herts.
TRANMER : Frank [*P.* 1906]; 8 Chatsworth Grove, Harrogate.
WRIGHT : Charles Henry [*P.* 1904]; 49 Market Square, Aylesbury.

The following table shows the number of failures in each subject of the Intermediate Examination :

I. Classic Architecture	30
II. Mediæval Architecture	43
III. Renaissance Architecture	44
IV. History of Architecture	39
V. Theoretical Construction	35
VI. Descriptive Goemetry	22
VII. Applied Construction	29

Exemptions from the Intermediate.

The following Probationers, possessing the certificates required under the regulations, were exempted from sitting for the Intermediate Examination and have been registered as Students, viz.:

BUTLER : Arthur Stanley George [*P.* 1909]; 71 Iverna Court, Kensington, W. [Architectural Association Four Years' Course].
GAYMER : Bernard Preston [*P.* 1908]; Bedford Row Chambers, 42 Theobald's Road, W.C. [Architectural Association Four Years' Course].
McKAY : John Ross [*P.* 1910]; 22 Oxford Street, Edinburgh [School of Art and Heriot Watt College, Edinburgh].
MARTYN : Laurence Dunmore [*P.* 1906]; Ingram House, Stockwell Road, S.W. [Architectural Association Four Years' Course].
MAYHEW : George Melbourne [*P.* 1906]; The Vicarage, Arlesey, Hitchin, Herts [University of London School of Architecture].
ROBERTSON : David [*P.* 1912]; 53 Airlie Gardens, Hyndland, Glasgow [Glasgow School of Architecture].
ROGERS : Cecil Walter [*P.* 1908]; 15 Enmore Road, Putney, S.W. [Architectural Association Four Years' Course).
SHEWEN : Mary [*P.* 1912]; 10K Hyde Park Mansions, N.W. [University of London School of Architecture].

The Final and Special.

The Final and Special Examination, qualifying for candidature as *Associate R.I.B.A.*, was held in London from the 20th to the 28th June. Of the 118 candidates examined, 46 passed, and the remaining 72 were relegated in various subjects. The passed candidates are as follows :—

[*S.*=Student.]

ALLEN : Albert George Westerman [*S.* 1907]; "Glenmaye," Roundhay, near Leeds.
AXTEN : Herbert Joseph [*S.* 1908]; "Normanville," 73 Lausanne Road, Hornsey, N.
BANSOR : Thomas Paul [*S.* 1908]; Church Hill House, Crofton, Wakefield.
BARRY : Francis Renton, Jun. [*S.* 1911]; Inchgarth, Kew Road, Richmond, S.W.
BENNETT : Thomas Penberthy [*S.* 1911]; 46 Cambridge Avenue, Kilburn, N.W.
BHEDWAR : Sohrab Keikhosru [*S.* 1910]; 14 Bedford Row, W.C.
BOOTH : Alfred [*S.* 1908]; 219 Sheffield Road, Beechfield, Barnsley, Yorks.
BRIDGMAN : Gordon Brock [*Special*]; Sudan Club, Khartoum, Sudan.
BROWNLEE : Herbert John [*Special*]; 4 Fitzroy Street, W.
CHESTON : John Allford [*S.* 1910]; Hampton Lea, Langley Park Road, Sutton, Surrey.
COOPER : Archibald [*S.* 1906]; 18 Hencroft Street, Slough.
DALGLIESH : Kenneth [*S.* 1909]; Ingram House, 165 Fenchurch Street, E.C.
EVANS : Charles Glynn [*S.* 1909]; 13 New Street, Neath.
GAUNT : Oliver [*S.* 1907]; 77 Walsworth Road, Hitchin, Herts.
GILMOUR : Thomas Gilchrist [*Special*]; 101 Craigpark Drive, Dennistoun, Glasgow.
GOLDSTRAW : Harold [*S.* 1908]; St. John Street, Hanley.
GREEN : John William [*S.* 1907]; 113 Rock Street, Pitsmoor, Sheffield.
HARVEY : John Curley [*S.* 1908]; 68 St. George's Avenue, Northampton.
HOLLAND : Percy Estcourt [*S.* 1907]; The Gables, Bexley, Kent.
HONEYBURNE : Ernest Hardy [*S.* 1903]; 23 Duke Street, Southport, Lancs.
HUGHES : Rowland John [*S.* 1906]; Tremynfa, Llanfairfechan, N. Wales.
INGRAM : Thomas Frederick [*S.* 1903]; 201 Great Portland Street, W.
KAY : John William [*S.* 1909]; H.M. Office of Works, 3 Parliament Square, Edinburgh.
MAUGHAM : Joseph Robinson [*S.* 1908]; 38 Windsor Terrace, Gosforth, Newcastle-on-Tyne.
MOORE : Frederick William [*S.* 1910]; Riddlesden, Keighley.
MUIR : Robert George [*Special*]; Gerrards Cross, Bucks.
OPENSHAW : Frederic Evelyn [*Special*]; 19 Frenchay Road, Oxford.
OWEN : Wilfrid Scatter [*S.* 1910]; 96 Heath Street, Hampstead, N.W.
PICKMERE : Travers [*S.* 1909]; 51 Temple Fortune Hill, Hampstead Garden Suburb, N.W.
POPE : Thomas Campbell [*S.* 1907]; 7 Emlyn Villas, Stamford Brook, W.
PUTWAIN : William Stewart [*S.* 1907]; 9 Relf Road, Peckham, S.E.
ROBERTS : Robert George [*S.* 1904); 211 Cemetery Road, Sharrow, Sheffield.

ROBINSON : John Charles [*S.* 1908]; 306 Alcester Road, Moseley, Birmingham.
SCHOOLING : Stanley Philip [*S.* 1908]; St. Kilda, Bycullah Avenue, Enfield, Middlesex.
SCOTT : Eric Wilfrid Boning [*S.* 1910]; 45 Hermitage Road, Finsbury Park, N.
SCOTT-MONCRIEFF : William Walter [*Special*]; 13 Hart Street, Bloomsbury Square, W.C.
SOMERFORD : Thomas Retford [*S.* 1910]; 59 St. James' Road, Brixton, S.W.
SPURR : Willie Rowland [*S.* 1905]; Manor Cottage, Ossett.
STOKOE : Ralph [*S.* 1908]; 12 The Oaks, Sunderland.
SUTCLIFFE : Eric John [*S.* 1908]; 12 Osborne Street, Hebden Bridge, Yorks.
TALVALKER : Vasudeo Ramchandra [*S.* 1910]; 45 Brondesbury Villas, Kilburn.
TOPHAM : Geoffrey Ronald Gilbertson [*S.* 1911]; 22 Crooms Hill, Greenwich.
WARRY : John Lucas [*S.* 1906]; 8 Colehill Gardens, Fulham Palace Road, S.W.
WEBB : Philip Edward [*S.* 1911]; 1 Hanover Terrace, Ladbroke Square, W.
WHINCOP : Walter George [*S.* 1908]; 74 Filey Avenue, Stoke Newington, N.
WILLIAMS : Llewellyn Edwards [*S.* 1911]; 62 Minford Gardens, West Kensington.

The following table shows the number of failures in each subject of the Final Examination :—

I. Design	53
II. The Principles of Architecture	20
III. Building Materials	19
IV. Principles of Hygiene	39
V. Specifications	27
VI. Construction—Foundations, etc.	39
VII. Construction—Iron and Steel, etc.	54

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Preliminary Examination.

VII. Freehand Drawing : Mr. H. P. Burke Downing [*F.*]

Intermediate Examination.

I. Classic Architecture : Messrs Arthur E. Henderson [*Licentiate*] and John A. Marshall.
II. Mediæval Architecture : Messrs. C. Wontner Smith [*A.*] and P. Leslie Waterhouse [*F.*].
III. Renaissance Architecture : Messrs. Henry Tanner, Jun. [*F.*], and Arthur T. Bolton [*F.*].
IV. General History of Architecture : Messrs. W. A. Forsyth [*F.*] and D. T. Fyfe [*F.*].
V. Theoretical Construction : Mr. Matt. Garbutt [*F.*] and H. A. Newton.
VI. Descriptive Geometry : Messrs. E. R. Barrow [*F.*] and Alan E. Munby [*A.*].
VII. Applied Construction : Messrs. Arthur Ashbridge [*F.*] and W. R. Davidge [*A.*].

Final and Special Examination.

I. Design : Messrs. Harry Redfern [*F.*] and E. A. Rickards [*F.*].
II. Principles of Architecture : Messrs. Charles Spooner [*F.*], C. Harrison Townsend [*F.*], and F. W. Troup [*F.*].
III. Properties of Building Materials : Messrs. H. D. Searles-Wood [*F.*] and A. H. Kersey [*F.*].
IV. Arrangement of Buildings in relation to health : Messrs. Albert W. Moore [*F.*] and W. Henry White [*F.*]
V. Specifications and Estimating : Messrs. Matt. Garbutt [*F.*] and Edward Greenop [*A.*].
VI. Construction : Foundations : Messrs. Alfred Conder [*F.*] and W. E. Vernon Crompton [*F.*].
VII. Construction in Iron and Steel : Messrs. Arthur Ashbridge [*F.*], Bernard Dicksee [*F.*], and Digby L. Solomon [*A.*].

The Final Examination : Problems in Design.

The Board of Architectural Education have approved the designs [see Journal, 13th Jan. 1912] submitted by the Students mentioned below who are qualifying for the Final Examination :—

Subject I. (*b*).—A Terrace of Five Houses.—Mr. K. Glover.

Subject II. (*a*).—A Monument to an Explorer.—Mr. K. Glover.

Subject III. (*a*).—A Detached Ball-room to a large Country House.—Messrs. E. F. Bothwell, H. C. Bradshaw, R. S. Dixon, H. A. Dod, E. Gee, T. C. Lawrence, R. A. Barber.

Subject III. (*b*).—A Landing Stage to a River or Lake, with a Restaurant.—Messrs. H. Lidbetter, E. Prestwich, W. H. Thompson, R. A. Walter, W. E. Woodin.

The designs of Messrs. K. Glover, G. C. Charlewood, and C. J. K. Clark in Subject III. have also been approved.

Newly elected Licentiates.

At the Council Meeting of the 24th June the following candidates were elected Licentiates R.I.B.A. in accordance with the provisions of By-law 12 :—

ABRA : William James (Ottawa, Ontario).
ADAMS : Frank Boulter.
ALLAN : David L. (Dundee).
ALLAN : John Alexander Ogg (Aberdeen).
ALLEN : Ernest George.
BADGER : Frederick Ernest George (Liverpool).
BAIGENT : Henry Joseph.
BAILLIE : William (Glasgow).
BAKER : Henry George (Aldershot).
BARCLAY : William (Glasgow).
BARKER : Frederick George (Liverpool).
BARKER : Herbert Mayer (Vancouver, B.C.).
BARTON : William Henry.
BAXTER : D. W. (Dundee).
BAYNES : William Albert (Hanley).
BELCHER : Alan Leslie.
BELL : George (Newcastle-on-Tyne).
BEMBRIDGE : Alfred Norman.
BETHELL : Lionel Beresford.
BISHOP : William Mair (Motherwell).
BLACK : Alfred Barham (Adelaide).
BLACKETT : William Arthur Mordey (Melbourne).
BLACKSHAW : Warren (Stockport).
BLADEN : Lionel Macdonald Wells (Gold Coast).
BLESSLEY : Harry Douglas (Cardiff).
BOND : John Owen (Norwich).
BOTTING : Milton.
BRADFORD : Percy Richard.
BRAY : Edward Herbert.
BRIDGES : Oswald Arthur (Bognor).
BRIGHT : William Frank.
BROOKS : A. E. (Brisbane).
BROWN : John (Stranraer).
BROWN : Thomas (Liverpool).
BROWNE : William Harold (Calcutta).
BROWNING : Harry Le Cronier.
BURGESS : Horace (Brighton).
BURGESS : Samuel Edwin (Middlesbrough).
BURNETT : E. W. (Colwyn Bay).
CALDWELL : Robert Whitelaw (Glasgow).

CAMMACK : J. Herbert (Liverpool).
CAMPBELL : John Begg (Govan).
CANE : Harold.
CANNON : Frederick.
CHALMERS : Francis Runcie.
CHAPMAN : Frank William (Sheffield).
CHRISTIAN : Charles Wesley (Leicester).
CLARK : W. (Dundee).
COCKLE : Frank Wiles.
COLDMAN : Harry Arthur.
COLERIDGE : Ernest Wm. George (Wellington,N.Z.).
COOK : William Vince (Ipswich).
COOKE : Samuel Nathaniel (Birmingham).
CORBLET : Cyrille Joseph.
COSSAR : John Henry (Derby).
COWIN : Norris Tynwald (Pretoria).
CRATNEY : Edward (Wallsend-on-Tyne).
CRAWFORD : Charles (Uddingston, Lanarkshire).
CRAWFORD : James William (British Columbia).
CROMBIE : Wilfrid Fitzalan (Dumfries).
CROSS : Arthur G. (Durban).
CUTLER : Adolphus Frederick.
DAKERS : William Sydie.
DANIEL : Francis John (Market Harborough).
DANIEL : Thomas Brammall (Saskatoon, Canada).
DAVIDSON : John (Dumfries).
DAWSON : Charles Ford.
DAY : John (Wakefield).
DECKMAN : Harry Arthur Cornelius.
DICKEN : Aldersey.
DYER : C. H. (Bloemfontein).
DYSON : Ernest William (Barnsley).
EDWARDS : Frederic Richard Lees (Manchester).
EDWARDS : John Percival.
ELTRINGHAM : John Joseph(Blackhill,Co.Durham).
EVANS : Ernest Hollyer.
EVANS : William.
FALCONER : Lake, Junior (Oban).
FARE : Arthur Cecil.
FAUNCH : F. G. (Ilford).
FEARNSIDE : Reginald Kitto (Cardiff).
FERGUSON : William, Junior (Canada).
FERRY : Ernest Frank.
FIELD : Leonard Martin (Portsmouth).
FIELDING : William (Wellington, N.Z.).
FILLARY : Albert Anthony.
FLEMING : F. L. H. (Johannesburg).
FLETCHER : George Hornby (Preston).
FLOWERS : Henry Horne.
FOGGIE : Thomas Kilgour (Dundee).
FORD : W. H. (Frankfort, O.F.S.).
FORDHAM : R. A. (Peterborough).
FORSDIKE : W. A. (Sheffield).
FOSTER : Gains.
FOSTER : William Thomas Benjamin (Seaford).
FOWLER : Joseph Ades (Ontario, Canada).
FREEMAN : Frank R. (Bolton).
GALBRAITH : Augustus William de Rohan(Zanzibar).
GAMBLE : James Gardner (Belfast).
GARDNER : H. R.
GARIEPY : J. R. (Montreal).
GARLICK : Edward (Stalybridge).
GARVIE : John (Gourock).
GIBSON : Robert Moir.
GILL : Harry (Nottingham).
GILL : William (New South Wales).
GILLING : Frederic Glynn (Liverpool).
GILLMAN : Arthur Claude (Khartoum).
GODFREY : Leopold Henry (Pretoria, South Africa).
GOOD : C. T. (Adelaide).
GOODISON : Ingleson Charles.
GOODWIN : Sidney Hall.
GOODWIN : Walter.
GOSLING : Albert Edward.
GOULD : George.
GOULDING : Edward Francis (Northampton).
GRAY : James (Bonnyrigg).
GREEN : Edwin Fallding (Gainsborough).
GREY : George Willis.
GROUT : Philip (Bristol).
HALL : Charles Wardle (Felling-on-Tyne).
HAMILTON : Arthur Donald (Glasgow).
HARDIE : Alexander Murray (Edinburgh).
HARDING : John (Cardiff).
HARDMAN : James.
HARRIES : Louis Richards (Penarth).
HARRIS : William Archibald.
HART : G. A. J. (Christchurch, N.Z.).
HAWKE : Robert George (Glossop).
HAXTON : Andrew David (Leven, Fifeshire).
HEALEY : William Everard (Maidenhead).
HEATON : Richard Arthur (Wigan).
HEAZELL : Edward Henry (Nottingham).
HEIR : Montague John (Johannesburg).
HENSHAW : Frederick (Andover).
HIBBERT : Arnett.
HILL : Francis Bruce.
HILL : Reginald John (Brecon).
HODDER : Richard Nicholl (Johannesburg).
HODGSON : Gilbert (Alberta).
HOETS : J. G. D. (South Africa).
HOFMAN : Paulus Johannes Cornelis (Pretoria).
HOLDSWORTH : C.
HOLLINGWORTH : Alfred Richard (Manchester).
HOLMES : George (Leeds).
HOUSLEY : Freeman (Derby).
HUNT : Arthur Charles (Bournville).
HUNT : H. Holman (Rangoon).
HUNTER : James Alexander Mitchell (Manchester).
HYAMS : H. (Paignton).
ILLINGWORTH : William (Bradford).
INGMAN : Arthur Morrison.
IZARD : John Grafton.
JACKSON : Charles Ernest (Edinburgh).
JACKSON : Reginald William (Lancaster).
JAMIESON : Frank (Liverpool).
JOHNSON : William Henry, Jun. (Edinburgh).
JONES : Claude Percy (Vancouver, B.C.).
JONES : H. T. (Cape Town).
JONES : Robert Colquhoun Fowler (York).
JONES : Sydney Robert (Leek Wootton).
JUPP : Colin Kingsley (Templecombe).
KAY : George Herbert (Manchester).
KEIGHLEY : Gilbert (Burnley).
KEIGHLEY : Samuel (Burnley).
KEITH : W. D. B. (Broughty Ferry).
KERR : William (Alloa).
KEY : John William (Lewes).
KING : Cecil Campbell (Toronto, Canada).
KIRBY : Edmund Bertram (Liverpool).
LAIN : Percy Edgar Cyril.
LASKIE : Alexander Gairns (Glasgow).
LATHAM : Arthur Gilbey (Birmingham).
LAWS : Harry James.
LEAHY : William James.
LEMM : John (Hongkong).
LEWIS : George Edwards Dickens (Aberystwyth).
LEWIS : Percy Sanford.
LITTLEWOOD : Lionel.
LLOYD : Thomas Alwyn.
LOFTHOUSE : Albert Wilson (Middlesbrough).
MacCOLL : Ralph Baxter (Bolton).
McCUBBIN : David Aitken (Johannesburg).
MACDONALD : Cameron (Inverness).
McGOVERN : Joseph Henry (Liverpool).
MACKENZIE : John.
MACKINTOSH : John (Edinburgh).
MACRITCHIE : George (Fort William, Inverness).

MADGIN : Alfred James.
MANUEL : John (Colwyn Bay).
MARK : Oliver Halle (Durham).
MARSHALL : Arthur John (Edinburgh).
MARTIN : A. E. (Montreal).
MASEY : Cecil.
MASTERS : Frank Norman Denison (Doncaster).
MAYELL : Roland Young.
MEEK : Edward (Wellington, N.Z.).
MELDRUM : Alexander Robert (Aberdeen).
MESTON : Alexander Clark.
MILLER : James (Glasgow).
MITCHELL : J. Henry Heselton.
MITCHELL : William.
MONEY : James (Glasgow).
MOORE : Harold Ellis (Middlesbrough).
MOORHOUSE : Geoffrey Goodwin (Liverpool).
MORRIS : George Llewellyn.
MORRIS : William Rickards (Reading).
MULES : Roderick John (Rosyth, Fife, N.B.).
NASH : William Alfred.
NATHAN : Percy P.
NAYLOR : Charles Henry Reginald (Nottingham).
NEWBY : Frederic Wales (South Shields).
NEWELL : Thomas.
NEWLANDS : William (Kilmarnock).
NEWTON : Percy Gerald.
NICHOLLS : Frank.
NICHOLLS : William Henry (Madras).
NICHOLSON : Arthur Thomas (Preston).
NICOLL : James Peter (Wellington, N.Z.).
NUNN : Frank Reginald (Colchester).
OLIVER : Charles (Hull).
PAGE : George Montague.
PAGE : William Meek (Wellington, N.Z.).
PALMER : Frank Morton, Junr. (Burton-on-Trent).
PARSONS : F. B. (Birmingham).
PEAKE : Frank (Manchester).
PEARCE : N. B. (Edmonton, Alberta).
PERCIVAL : James (Manchester).
PHILLIPS : John (Wakefield).
PLUCK : James Edward (Colchester).
PRAIRIE : Edgar (Montreal).
PRENTICE : Arthur Godbold.
PRESCOTT : Orlando Edmund Thomas (Wigan).
PRESTWICH : Harold Oswald (Leigh, Lancs.).
PRITCHETT : Herbert Dewes (Darlington).
PURDIE : Thomas Stewart.
PYOTT : G. A. (Dundee).
RANKIN : William (New York).
RICHARDSON : Harry Thurston (Shrewsbury).
RIDDLE : Wilfrid Patterson (Hull).
ROBERTS : Charles Henry (Invercargill, N.Z.).
ROBERTSON : David Webster (Edinburgh).
ROE : George Arthur Maurice.
ROSS : James McGlashen.
ROSSITER : Horace Edward.
ROTHWELL : Edwin (Hastings).
ROWLEY : Alfred John (Canada).
ROYDS : Alan Francis.
RUSHTON : Thomas Johnson.
RUTHIN : Charles Tamlin (Swansea).
SALKELD : Thomas (Kendal).
SANDERSON : Louis Norman (Scarborough).
SAUNDERS : John Thomas.
SCHOLTE : A. H. (South Africa).
SCHWARTZ : George Guido (Wellington, N.Z.).
SEAMAN : Albert Edward.
SEWELL : R. V. T. (Teignmouth).
SHANKS : William (Johannesburg).
SHARPE : David (Dundee).
SHEBBEARE : Henry Vivian.
SMITH : Ernest Henry (Walsall).
SMITH : George Henry.
SMITH : H. V. Crawfurth (Dublin).
SMITH : William Charles Clifford.
SPOOR : Stanley Miles.
STAINS : Leonard Robert.
STEDMAN : James (Kinross).
STENNING : Philip Eustace.
STEPHENSON : Samuel James (Newcastle-on-Tyne).
STEVENSON : William Cowley (Devon).
STILL : John Edward.
STIRLING : William (Colombo, Ceylon).
STORRY : Thomas Tate.
STRONG : James (Liverpool).
SYMON : A. A. (Arbroath).
TAYLOR : Edward.
TAYLOR : Harold (Barnsley).
TEBBS : William Arthur (Alnwick).
THOMAS : Charles Frederick (Cardiff).
THOMAS : Edward J. (Bristol).
THOMAS : Owain Tudor (Haverfordwest).
THOMERSON : Albert.
THOMPSON : Albert John.
THOMSON : Alexander Houston (Airdrie, N.B.).
THOMSON : David (Dundee).
THOMSON : James (Bo'ness).
THOMSON : John Miller (Airdrie).
TINSLAY : Thomas Percival.
TOBIAS : Maurice.
TOMKINS : Samuel Edward.
TOMLINSON : Charles W. (Leeds).
TRIFFITT : Charles (York).
TUCKER : Arthur Haines (Worthing).
TUFNAIL : Harry Philip (Bognor).
VASEY : John Mowbray Harrison (Sunderland).
VINYCOMB : John Knox.
WADDELL-DUDLEY : Francis Guilford.
WADE : Walter (St. Anne's-on-Sea).
WAINWRIGHT : Reginald (St. Helens, Lancs.).
WALKER : James Caughey (Liverpool).
WALKER : William (Leven, Fifeshire).
WALSH : John.
WARD : Christopher James (Cardiff).
WASS : Frederick Julian.
WATKIN : Arthur Charles Hendrey.
WATNEY : Dendy.
WATSON : Henry B. (Vancouver).
WEBB : Joseph (Ipswich).
WEBBER : Huart (Calcutta).
WEBSTER : David (Saskatoon).
WEIGHTMAN : Fred Norman (Newcastle).
WELCH : Henry John.
WEMYSS : Robert (Glasgow).
WESTON : Sidney Isidore.
WHITE : Thomas Kielingwerth (Newcastle-on-Tyne).
WHITMORE : S. W. (Pretoria).
WHYTE : Robert (Helensburgh).
WHYTE : William McNicol (Glasgow).
WICKSTEED : Archie Frederic.
WILLETT : James Henry.
WILLIAM : G.
WILLIAMS : Harold Percy (Halifax).
WILLIAMS : J. Morris (Glamorgan).
WILLIAMSON : John St. Clair (Ayr).
WILLS : John Ross.
WILLS : William Francis (Derby).
WILLSON : Richard Horace (Aberaman, Glams.).
WILSON : Andrew Victor (Motherwell).
WILSON : Arthur Gordon (Canada).
WITTET : John (Elgin).
WITTS : Francis H.
WORROW : Frederick.
WORROW : Harry John.
WRATHMELL : John E. (Stockport).
WRAY : Joseph Richard (Middlesbrough).
WRIGHT : Charles Henry Challener (Toronto).
YOUNG : James.
YOUNG : Walter Guy (Cardiff).

RIBA Architectural Library

[Photo. Holliday & Son.

"That sweet city with her dreaming spires."

THE ARCHITECTURE OF OXFORD.—I.

By W. S. Purchon [*A.*].

Read before the Sheffield Society of Architects and Surveyors at the University of Sheffield, 9th November 1911.

FOR the architect engaged in a manufacturing city, working of necessity principally on buildings of a strictly utilitarian character, there is perhaps no finer architectural tonic than a leisurely sojourn in such a city as Oxford. During a short visit—a week-end, or even a day—one may go rapidly through the various colleges, be impressed by the mere number of interesting buildings gathered together in such a small space, and one may note many interesting features and perhaps make sketches of some of them. During a longer stay much interesting and useful information may be accumulated, many photographs taken, or, what is better, a number of sketches or a few measured drawings may be made. But during this longer stay something of vastly greater importance than this is almost sure to happen. It may not, perhaps, happen while one is sketching, or measuring, or even consciously thinking about the buildings: it is, in fact, more likely to happen during a restful hour spent in one of the charming gardens for which Oxford is famous, or during a quiet stroll in the evening after a day spent in working on the buildings. And this important something is the coming to one of a little of the spirit of the place and of the makers of it. After this the visitor's eyes are opened, and he sees the buildings no longer "as through a glass darkly." If he be no longer young, perhaps some of the enthusiasm and idealism of youth will return to him, and he may go back to the smoky city to find that after all something can be done with those utilitarian buildings, that after all no building is so small or built on such economical lines that the architect cannot put something of his art into it. If on the other hand the visitor is just beginning his architectural life he will probably go about his work more

quietly and thoughtfully on the morrow. The making of measured drawings will no longer be the somewhat dull and mechanical task he had previously thought it. No longer will it be something he can do while he thinks of something else, for he will realise that the building is not a dead thing of stone and mortar, but that it lives and speaks. The stones and their joints, the subtle curves of the mouldings, the arrangement of the various parts and the massing of the building as a whole, all these have something to say to him, something which at first he can hardly understand. But if he works on sympathetically it will gradually become clear, and, initiated into one of the greatest of mysteries, he will receive the message given to the building by its designer. And he learns now that when the time comes for him to design, his buildings too will receive a message, and, worthy or unworthy, while the buildings last, it will be read by all who understand. Thoughts such as these naturally make me realise the difficulty of my task, and my presumption in attempting it, but I trust that with the assistance of the illustrations this paper may bring some pleasant memories to those who know Oxford, and a desire to know it to those who do not.

I purpose then to take in chronological order as far as possible—for some order is essential and this seems less inconvenient than any other which presents itself—some of the leading buildings in Oxford. And if I venture somewhat beyond Oxford, it will not be because of an inadequate supply of suitable material in that city, but because the country which surrounds it is so full of interesting examples.

Of Saxon work in Oxford but little need be said. Near the Castle is the Mound stated to have been raised in 910, and at the east end of the Lady Chapel and Choir aisle of the Cathedral there are some walling, arches, and the foundations of three apses which antiquaries allow us to hope may possibly have formed part of the original church of St. Frideswyde, a delightful lady who died in 739, and who, according to the account given by William of Malmesbury, was so charming that she had to protect herself from her lover and his ambassadors by blinding them.

The Tower of St. Michael's Church presents to some extent the appearance of Anglo-Saxon work, but it was probably built after the Conquest, and it has been considerably restored. Its quiet simplicity gives it a dignity which is lacking in many far more pretentious buildings. The main building was restored by Street in 1855. Close to the church until 1770 stood the North Gate with the Bocardo Prison over.

Oxford Castle was built during the reign of William Rufus by Robert D'Oyley. The grey ruins of its tower have but little architectural interest. Within the castle was St. George's College, a small church and college of priests, and the crypt of this, built about 1071, contains some very crude capitals, probably carved by Saxon craftsmen.

At St. Peter's-in-the-East the Norman crypt has a groined vault similar to that at St. George's, with plain arches for longitudinal and cross ribs supported on eight cylindrical piers, the capitals of which are more advanced than those at St. George's. In the eastern compartment of the vault of the chancel above chains are worked on the diagonal ribs. The north aisle is separated from the nave by a fine Early English arcade (about 1260); there is an excellent Norman south door, a fifteenth-century porch with parvise, and a somewhat curious but by no means displeasing tower with sides sloping inwards.

In a charming situation on the banks of the Isis, about two miles from Oxford, stands Iffley Church, built in 1160 and extended eastward about 1270. The circular window at the west end is modern, and fourteenth and fifteenth century windows have been inserted in several of the Norman openings. The west front with its fine doorway and upper windows is perhaps the most interesting part of the church. In large Norman churches in England the doorway is usually far too small for the west front, but in the smaller buildings, of which this is an excellent example, the proportions are happier. The most noteworthy features of the

interior are the fine tower arches, the black marble shafts, the Norman and Early English chancel vaults, and the black marble font of 1160.

The door of the Chapter House of the Cathedral is an excellent piece of Early Norman work (about 1125), but the principal part of the Cathedral is transitional. The interesting

Photo. Wilson Brothers

CHRIST CHURCH CATHEDRAL, LOOKING EAST.

expedient of arranging the triforium below the main nave arcade, probably to make the best of the want of height in the nave, is well worthy of notice, and so are the charming capitals. There is a timber roof over the nave, but the aisles have groined vaults with heavy, moulded ribs supported on corbels in the form of half-capitals emerging in curious fashion about two-

thirds of the height up the cylindrical piers. The Chapter House is a good example of Early English work, with lancet windows, and a vault of that simple type which was never improved by the later builders notwithstanding their tiercerons, liernes, or pendants. The tower and its sturdy spire (which may be described as a broach spire without broaches) are also of this period, the windows showing the germ of tracery, but the junction between the spire and the tower is not happily masked by the pinnacles, which were perhaps used here for the first time in place of broaches. North of the choir aisle a Lady Chapel was constructed in the Lancet style, perhaps for the shrine of St. Frideswyde, the fragments of which form a beautiful example of the early use of naturalistic foliage, the shrine having been constructed about 1289. About the middle of the fourteenth century the Latin Chapel (to the east of the north transept) was constructed with fine traceried windows some of which retain the original fourteenth-century glass. Prior Sutton's canopied tomb on the south side of the Latin Chapel dates from about 1310. About the same time the East Chapel of the south transept was enlarged and several early windows were replaced by larger ones with flowing tracery. During the Perpendicular period the cloisters were rebuilt, various windows were inserted, and the somewhat over-elaborate chancel vault was erected. The wooden "watching chamber," probably a chantry-tomb, was erected in 1480. Corbels were formed for a nave vault, but this was not erected. In 1524 the three western bays of the nave were pulled down to make room for Wolsey's new quadrangle, but one bay has been rebuilt in recent times by Scott, who also removed a great fourteenth-century window in building his Norman East End. As a result of these various alterations the plan is a very curious one. The windows by Burne-Jones and Morris, the seventeenth-century glass in the window at the west end of the north aisle—all that remains of many such windows—and the reredos and font-cover by Bodley should all be noted.

Of the quadrangle, Wolsey completed the east and south sides and part of the west. The arches indicating the original design for a cloister, the parapet and pinnacles to the hall on the south side, and the tower in the south-east corner are modern. The latter (by Bodley and Garner, 1879) is finely proportioned, and its ornament excellently concentrated in the niches and panelling over the old entrance and in the fine parapet. The hall, with its fine open-timber roof, is second only perhaps to that at Westminster. The stair to the hall is interesting because of its fan vault, which was built as late as 1640.

The church of St. Giles, which is situated in the north of Oxford, contains some interesting thirteenth-century work, particularly the tower windows, which are very curious examples of early plate-tracery, the space above two lancets under a containing arch being pierced with an opening in the form of a small lancet. These windows, together with others in the church, form a complete series of Early English examples showing the development from lancet windows to bar tracery. The font is a good specimen of about 1220.

The earliest part of Merton, the oldest of the Oxford colleges, its statutes dating from 1264, is the muniment room, which, with its lofty stone roof, was probably in existence before the erection of the college. The choir of Merton Chapel with its fine seven-light east window, and its fourteen three-light side windows of varied and charming design, was erected between the years 1290 and 1300 and is a beautiful example of Early Decorated work. The transepts were not finished until 1414, and the tower until the middle of the fifteenth century. Internally the simple lines of the fine tower arches are very impressive, and the external treatment of the tower is excellent. Of the hall, built in the founder's time, little remains but the walling: in the entrance doorway, however, is an old oak door with fine ironwork of about 1330. Unfortunately Wyatt attempted to improve the hall, and Sir Gilbert Scott restored some of its ancient character in 1872. The library, built in 1377, is full of interest, with its old fittings and chains and rods for securing the books. The curious dormers were

built in the first quarter of the seventeenth century when the fittings were inserted. The entrance gateway was built in 1416, the statues on the front being of Henry III. and Walter de Merton, but the remainder of the front was rebuilt in 1589.

The steeple of the Church of St. Mary the Virgin (the University Church), a beautiful

[Photo. Holliday & Son.

THE CHURCH OF ST. MARY THE VIRGIN AND ANGLE OF BUILDINGS FOR BRASENOSE COLLEGE BY MR. T. G. JACKSON, R.A.

building in the famous High Street, was built about 1290. The tower is simple and strong, and the upper part of the spire is quite plain, but at the junction of the two there is a series of pinnacles and spirelights of remarkable richness, a concentration of ornament which is very telling. The spire was restored by Mr. Buckler in 1861, and again in 1897-8 by Mr. T. G. Jackson, when a controversy was aroused over the alteration made to the pinnacles

and the removal of the statues to the lower chamber of the old Congregation House. The nave and chancel were rebuilt toward the end of the fifteenth century, and are excellent examples of the work of the time.

The south aisle of the Church of St. Mary Magdalen, with its rich parapet, buttresses, traceried windows and font, was probably built in the early years of the fourteenth century, and its tower in the first half of the sixteenth. The church has been extensively restored, and the north aisle was rebuilt in 1841.

The tower is all that remains of the Church of St. Martin Carfax. It was probably built about the middle of the fourteenth century; but the church, which was pulled down in a street improvement scheme of 1896, was only built in 1830. The tower has since been restored by Mr. T. G. Jackson, who also added a stair turret. Close to the church stood Carfax Conduit, built in 1610 to supply the city with water, and removed in 1787 to Nuneham.

Between the years 1379 and 1393 the chapel, hall, library, cloisters, and front quadrangle of New College were erected close to the old city wall. Previous collegiate buildings had been built piecemeal, and here for the first time a complete set of buildings was erected without change of plan. The hall and chapel are placed end to end on the north side of the quadrangle, the hall being to the east, so that, in place of the usual east window, a great reredos filled with statues was arranged at the east end of the chapel. At the west end of the chapel the antechapel is projected north and south in transeptal form. The resulting plan resembles that of Merton Chapel, but it must be remembered that the transepts of the latter are later, and that the remains of western arches show that a nave and aisles were originally intended. Similar arrangements of hall and chapel were afterwards made at All Souls, Magdalen, and University Colleges. The chapel at New College is a fine example of Early Perpendicular work. Its open timber roof was restored in 1880, and the reredos still more recently. There is much of the original fourteenth-century glass in the antechapel, but that of the great west window was designed by Reynolds in 1782. The hall is a fine one, but unfortunately its roof became insecure, and Wyatt put in a ceiling, lowering it ten feet. Sir G. G. Scott was responsible for the present roof. The front quadrangle, which is approached by means of a narrow winding passage, was not improved by the addition of a story and the alterations made to the windows, but the cloisters, in the north side of which stands the detached bell-tower, are full of charm.

The Divinity School, and the library over (the oldest part of the Bodleian), were completed toward the end of the fifteenth century. The vault of the Divinity School is particularly interesting, being a late example of lierne vault with pendants. The straightness of the lines of some of the arches is however somewhat unpleasant. In later days Wren had to add great buttresses on the Exeter College side. The interior of the Bodleian Library, with its painted timber roof and curious fittings, is full of interest. Convocation House was opened in 1640; it contains some very interesting contemporary woodwork. Above it is the second extension to the Bodleian Library, the first one being an east wing built in 1610.

The building of Magdalen College was begun by the founder, William of Waynflete, in 1474, when work on the chapel was commenced. This building was completed about 1480, but it was very considerably restored between 1800 and 1850. As at New College, the east end is occupied by a great reredos, and there is a large antechapel at the west end. The west doorway is rendered interesting by the sculpture in the niches formed in the battlements, and by the curious detached arch which has been repeated in Mr. Bodley's additions. The interesting open-air pulpit adjoins the west front of the chapel. The window over the west door has such large spaces between the mullions that it is quite out of scale with the surrounding work. The beautiful detached tower, built between the years 1492 and 1507, is a remarkably fine example. Tall and slender, the verticality of its design is emphasised by continuing

the polygonal buttresses up above the rich parapet as lofty pinnacles, and by the slightly less lofty intermediate pinnacles. The massive lower stories and the buttresses give strength to the design, and the skilful concentration of the ornament draws the eye irresistibly upward. East of the chapel is the dining hall, which contains a fine Jacobean screen. Its open-timber roof was designed by Bodley in 1904, Wyatt having cheerfully inserted a plaster ceiling. The cloisters and the Founder's Tower on the west side were built about the same time as the chapel, but the curious statues on the buttresses were probably carved about 1509. The exterior of the north side of the cloisters was rebuilt in 1822. To the left of the entrance is the Grammar Hall, a charming piece of work also by the founder.

[Photo. Wilson Brothers.

MAGDALEN COLLEGE TOWER, FROM THE BRIDGE.

All Souls College was founded in 1437 by Henry Chichele, who built the front quadrangle, the windows of which were altered in the seventeenth century and the street fronts refaced early in the nineteenth. The chapel, on the north of the quadrangle, arranged as at New College with the hall to the east (but placed transversely) and a transeptal antechapel, has unfortunately been considerably restored. The reredos was walled up, and the timber roof concealed by a plaster ceiling during the seventeenth century. During the course of repairs in 1870, the reredos, in a very much damaged condition, was discovered and subsequently restored by Sir G. G. Scott, many of the statues being portraits of contemporary Fellows. The fine screen by Wren, which, thanks to the Fellows, Scott was not allowed to remove, has just been redecorated by Mr. Reginald Blomfield, who has also replaced Scott's Purbeck marble floor, which had perished badly, by one of marble—black, Brèche, and Skyros red.

There are in Oxford many extremely interesting examples of Jacobean work. Wadham College was founded in 1610, and practically the whole of the college was built as a complete scheme within a few years. Here the hall was built at the south end of the transeptal antechapel, and the curious Renaissance tracery of these buildings, with the central feature in which four sets of Orders are superimposed to make a frame for statues of James I. and the Founders, excite one's interest. The interior of the hall with its fine roof and screen shows clearly the new influence. In the chapel it seems that the builders felt obliged to retain Gothic forms in their windows which are slightly later than those of the antechapel, though the joiners seem to have been given a freer hand. The east window contains fine glass by the elder Van Linge (1620). The chapel was restored in 1834, and the organ gallery and organ case were designed by Mr. Jackson, a member of the college, who has recently constructed a smoke room in the roof over the Common Room.

The Fellows' Quadrangle of Merton College was built in 1608-10. It is entered through a vaulted Tudor archway, and opposite the entrance is a similar effort in the use of the Orders to that at Wadham. The exterior faces of these buildings are, however, more pleasing than those seen from the quad, notwithstanding their lack of the Orders. The work of this period in the library has already been noted.

The tower of the old schools, now the Bodleian Library, was built in 1439 and rebuilt 1613-18. For this rebuilding and for the contemporary work at Wadham and Merton, some would give the credit—or discredit—to Thomas Holt, a carpenter, who died in 1624, but probably he did little more in Oxford than the designing and executing of woodwork, the designs for the masonry being probably supplied by the masons Acroyde and J. and M. Bentley, and, in the case of Wadham, by William Arnold, a Freemason. In the rebuilding of the Schools the old work was reproduced to a considerable extent, but in the tower, before which the attempts at Wadham and Merton pale into insignificance, the whole five Orders were introduced in a singularly unattractive manner, and although they reach to a very considerable height, Gothic detail emerges triumphant above them. As Mr. Gotch suggests, it is indeed fortunate that there were not more Orders with which the designer might have adorned yet further stages.

The front quadrangle and hall of Brasenose College were built early in the sixteenth century, a third story being added during the Jacobean period. The Entrance Tower was altered in the seventeenth-century, but restored by the late Mr. Buckler. The library and chapel were commenced about 1656 and completed 1666. The chapel, with its fan-vaulted ceiling, its geometrical tracery, and its classic pilasters, architraves, pediments, etc., is one of the most extraordinary examples of the retention of Gothic forms in conjunction with classic ones.

Of University College, the front quadrangle was started in 1634 and finished in 1674, the hall and chapel being built in 1639, and in 1719 a smaller quadrangle was built to the east in the same style. These buildings, with their apparently endless repetition of the curious gables, are somewhat lacking in interest. The chapel, another example built with the blank east end, has been altered in various ways at different periods, and was restored in 1862 by Sir G. G. Scott. The old panelling and a fine screen however remain, and the glass by Van Linge the younger is also noteworthy. In the hall, which was extended westward in 1903, the fine timber roof, which was previously hidden by a plaster ceiling, can now be seen.

Between 1619 and 1642 the front quadrangle of Oriel College was built. The front to Oriel Street is a somewhat dull piece of work, with a lack of connection between the central tower and the wings. It must be admitted, I think, that the entrance towers of Oxford lack the charm of the Cambridge ones. In the quadrangle the gables of the external façade are repeated, but interest is given by the entrance to the hall, with its statues of the Virgin,

Edward II., and James I., the curious tracery similar to that at Wadham, and by the glimpse which can be obtained of Merton Tower. The hall, built in 1637, and restored in 1897, has a fine oak roof, and the chapel of 1642 was last restored and enlarged by Mr. T. G. Jackson.

Jesus, the first post-Reformation college, was founded in 1571, part of the Turl Street front dating from this time. The chapel, consecrated in 1621 and enlarged in 1636, is an example of very late Gothic. It was restored by Street in 1864. The Gateway Tower and the remodelling of the front were the work of Mr. Buckler in 1856. The hall, of the same date as the chapel, is interesting, as it retains the plaster ceiling which conceals the old roof, and has a fine Jacobean screen. Of the back quadrangle, which reminds one forcibly of University College, part was built before 1642, and the remainder finished in 1713.

[Photo. Holliday & Son.

MAGDALEN COLLEGE: OLD GRAMMAR HALL, AND CORNER OF NEW BUILDINGS BY BODLEY.

Of the front quadrangle of Lincoln College, the tower with its vaulted ceiling, the hall and north side were built shortly after 1429, the date of the foundation, by the Bishop of Lincoln. The sash-windows and modern battlements do not improve the appearance of the work. The college was built on the site of an old hall, of which the kitchen with steep timber roof and massive walls remains. The back quadrangle, with the chapel, was built between 1610 and 1631, and the parts which retain the mullioned windows and lack the modern battlements are very pleasing. The chapel, though of such late date, was built on mediæval lines, but its woodwork, carried out in cedar in 1686 and including the fine screen (which retains some Jacobean touches), stalls, and panelling, is of later character. The painted glass of contemporary date is probably Dutch or Flemish. The dining-hall had been considerably altered in 1791, but in 1891 Mr. Jackson removed the customary plaster ceiling, and in other ways restored its earlier appearance. These interiors will, however, be rarely seen by tourists, for the copy of the Lincoln Imp, which was unfortunately put up in 1900, can be seen in the first quadrangle.

Of the front quadrangle of St. John's College, the south and west sides belong to an earlier foundation. At first a house of Bernardine monks, in 1436 converted by Archbishop Chichele into the College of St. Bernard, given in 1539 by Henry VIII. to Christ Church, it was in 1555 refounded as St. John's, the hall having been built in 1502 and the chapel in

1530. There is an old statue of St. Bernard over the archway in the front to St. Giles, but, as at so many of the colleges, an additional story has been added to this front. The hall and chapel are on the north side of the quadrangle, but the chapel has no antechapel, and, being to the east of the hall, has an east window. The chapel was altered in 1662, when circular-headed windows were inserted and a small chapel added to the north, and restored by Blore in 1843. Below the hall, which has also been very considerably altered, are the vaulted cellars of the fifteenth century. The east side of this quadrangle, and the south side of the second or Canterbury Quadrangle, were built about 1597. This second quadrangle, finished in 1636, is of very great interest, containing the well-known colonnades, usually attributed, but probably in error, to Inigo Jones. The work is more advanced than any we have previously considered, though earlier in date than some of it. The central features with their two tiers of Orders are far more satisfactory than the more ambitious efforts we have seen elsewhere. They connect up well to the colonnades, but there is a decided lack of connection in the upper part. This together with the exuberance of the finely carved ornament would lead one to agree with Mr. Blomfield that a sculptor rather than an architect was the designer. One comes irresistibly to the conclusion that no amount of sculpture, or other form of decoration, no matter how fine, can make architecture, and that it is scarcely credible that the man who designed the Banqueting House in 1619 could have designed these arcades at a later date.

[Photo. J. R. Wigfull [A.].

St. John's College Gateway in Garden Front

And so one walks through the archway into the beautiful garden beyond, and turns round and sees the fine garden front. This is architecture indeed, and of the very highest type. Here is no fussiness, no attempt to captivate by overloading with ornament. The design, with its simple roof and its heavy masses at the angles and between the windows, is strong and broad, the perfect tying together of the parts gives unity, and the slight amount of ornament, added just where it is needed, is sufficient to give grace to the whole. Unfor-

tunately this beautiful front, in common with so much work in Oxford, crumbled badly and had to be restored. This has been carried out by a process which, while giving an unpleasant

St. Mary's Porch.

Reproduced from an Etching by H. Gordon Warlow [*A.*], by permission of the publisher, Robert Dunthorne, of Vigo Street, W.

appearance which it is hoped will only be of a temporary character, is far less drastic than that of refacing. The stone used in most of the Oxford work is Headington, and it seems that

in some cases the use of an inferior quality and lack of attention to proper bedding have led to decay.

The chapel and library of St. Edmund Hall, built in 1680, are interesting because they are housed in one building, the library being over the chapel. The composite three-quarter columns flanking the doorway and extending through the two stories are too slender and diminish too rapidly. The doorway, with its curved pediment supported at each end on a pile of books, is particularly interesting. The windows, which retain their leaded glazing, have mullions and transoms of square section, but the architrave of the upper windows is formed by returning the architrave of the entablature, which is too large for the purpose. The woodwork in the chapel is well worthy of examination.

The archway at the entrance to the Botanic Gardens, built 1631, is often attributed to Inigo Jones, but it is far more probable that it was designed by Nicolas Stone. The front to High Street is a very interesting piece of work, but the arrangement of the rusticated bands gives it rather a restless appearance, and the use of rustication at the back of a niche behind sculpture seems a mistake. The front to the Gardens is still less satisfactory.

The porch of the Church of St. Mary the Virgin was built in 1637, the workmanship being that of Nicolas Stone, but it is claimed, perhaps accurately, that Inigo Jones was the designer. It was restored by Sir Gilbert Scott in 1865. One may not care for twisted columns or for broken pediments, or for the combination of these with fan vaulting, but will still find this porch wonderfully attractive. It is however the appeal of the picturesque, of pictorial beauty rather than of those deeper qualities which are essential to a great work of architecture.

Having seen with what reluctance the Oxford builders forsook Gothic forms, retaining them in wondrous combinations with classic elements until after the middle of the seventeenth century, we now come to the consideration of work of the more fully developed Renaissance.

In 1664, Wren, who in 1653 was elected to a Fellowship of All Souls and in 1661 was appointed Professor of Astronomy at Oxford, began the Sheldonian Theatre, after designing his first architectural works, a doorway at Ely Cathedral and the Chapel of Pembroke College, Cambridge. The Sheldonian Theatre, the plan of which is stated to have been based on that of the Theatre of Marcellus, is far from being an entirely satisfactory structure. It is perhaps principally interesting because of its flat painted ceiling, and the great roof, in the construction of which Wren's knowledge of mechanics would be invaluable. Wren's roof was taken down in 1820, when his elliptical dormers were removed and his cupola replaced by a larger one. The polygonal front to Broad Street, with its rusticated and well-proportioned lower story and its upper story treated more delicately, shows that even at this period Wren was working on sound lines, but the façade to the Divinity School is far less satisfactory, particularly in the upper part, and the interior is most disappointing.

The old Ashmolean Museum, which adjoins the Sheldonian Theatre, was built in 1677. It is often attributed to Wren, but more probably the bulk of it is by T. Wood, Wren designing the western doorway and the window in the centre of the north front, two extremely beautiful features. The other windows retain the mullions and transoms.

In 1665 Wren was asked for advice on some new buildings required for Trinity College. He proposed a rectangular building, and, the subscribers desiring a quadrangle, he writes: "I am confirmed with Machiavell, or some such unlucky fellow, 'tis noe matter whither I quote trew, that the World is governed by wordes. I perceiue the Name of a Quadrangle will carrie it with those whom you say may possibly be your Benefactors, though it be much the worse situation for the Chambers, and the Beauty of the Colledge, and the Beauty of the particular pile of building; and if I had Skill in enchantment to represent the pile first in one position then in another, that the difference might be evidently seen, I should certainly make them of my opinion; or else I'le appeal to Mounsieur Manzard, or Signior Bernini, both

which I shall see at Paris within this fortnight. But, to be sober, if any body, as you say, will pay for a Quadrangle, there is no dispute to be made; let them haue a quadrangle, though a lame one, somewhat like a three-legged table."

And so three sides only of a quadrangle were built, the north one by 1668, the west in 1682, and the south wing was rebuilt in 1728. The character of Wren's work here was, however, destroyed by the addition of a third story in 1802, when the mullioned and transomed windows were replaced by sashes.

Trinity College Chapel, completed 1694, is also attributed to Wren. It has been suggested that Dean Aldrich designed it, and that Wren merely advised on some points of detail. Letters which passed between Dr. Bathurst and Wren do not make this point clear, but the high quality of the work would lead one to think that if Aldrich had any share in it, it was only a small one. The interior is one of the most perfect examples of its kind; the luxuriant

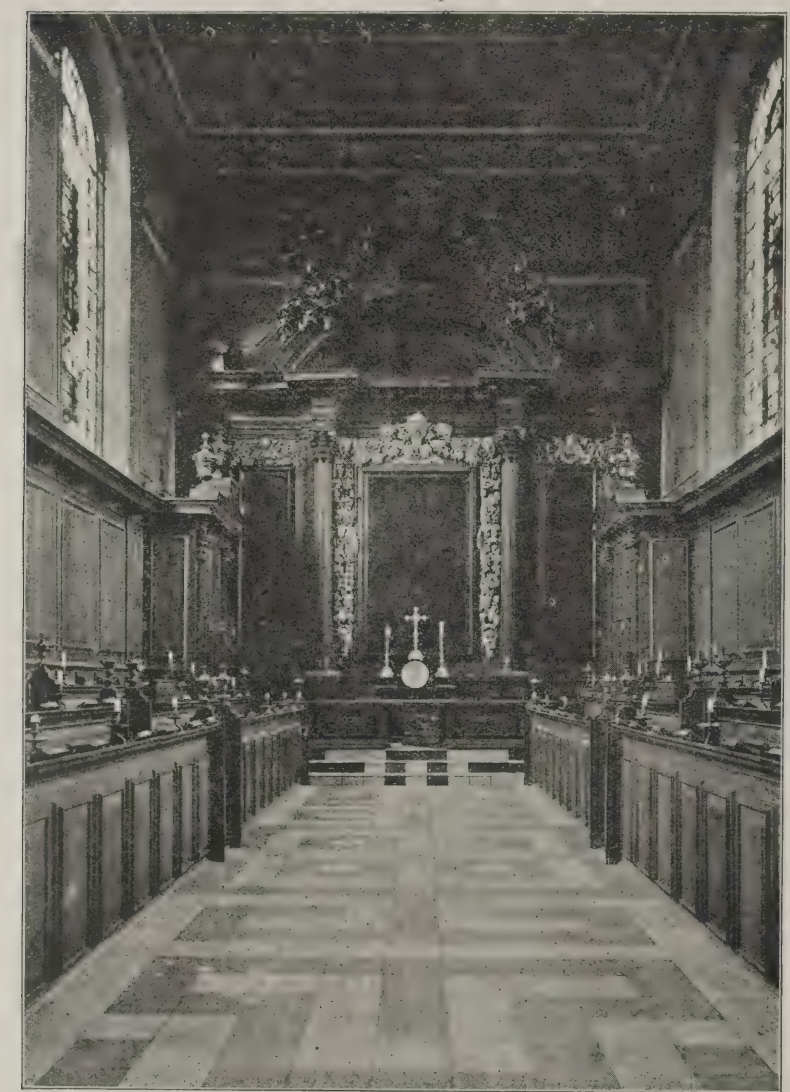
CLARENDON BUILDING, SHELDONIAN THEATRE, AND ASHMOLEAN MUSEUM. [Photo. Wilson Brothers.

wood-carving by Grinling Gibbons, the beautiful screen and panelling, and the Renaissance case to the mediæval tomb are particularly noteworthy. The figures were probably carved by Cibber. In Parks Road opposite Wadham College are some fine wrought-iron gates with symbolic triangular piers forming an entrance to Trinity. The piers at the main entrance in Broad Street are modern reproductions.

In 1682 Wren was employed to complete Wolsey's Entrance Tower to Christ Church. Tom Tower is perhaps Wren's best attempt at Gothic, but while its proportions and general lines are good, its detail is far too heavy for Wolsey's delicate work in the lower part. This west front of Christ Church has just been restored by refacing.

Wren's designs for the library of Queen's College (1693) follow to some extent the lines of his library at Trinity, Cambridge (1679), though at Oxford he had less difficulty with the floor levels and a smaller building with which to deal. On the eastern face to the quadrangle, the three central bays are projected forward slightly and treated with Corinthian pilasters on

the upper floor with sculpture in the pediment above and carved swags below the windows. The lower story is treated throughout as a simple arcade with strongly marked joints, and the four bays on each side of the central projection are kept quite plain in the upper story. The whole is in good proportion and well detailed. The western front, to the Fellows' garden, is similar, but more richly treated. The interior has a fine plaster ceiling and carving by Gibbons.



[Photo. Holliday & Son.

TRINITY COLLEGE: INTERIOR OF CHAPEL.

The back court of New College was commenced in 1661, a design for a closed quadrangle being rejected, and the present buildings (which open out as they near the gardens) were carried out by "William Birde, Mason in Oxford, according to a Moddell of the same, drawne by himselfe and delivered in." The two easternmost blocks were planned early in the eighteenth century. Above the classic cornice of the buildings has been placed a neat frilling of battlements with somewhat disastrous effect. To the east of this court, entered through some fine gates, are the beautiful gardens, in which are some remains of the old City wall.

Blenheim Palace, near Oxford, built between the years 1710-1715, is a good example of the work of Sir John Vanbrugh, who at the age of thirty-five abandoned literature for architecture. The main scheme here, as in other of his buildings, is that of a main block with subsidiary masses on each side. In this case the subordinate groups are advanced a long way in front of the primary mass. The work is obviously a carefully thought-out scheme, all the parts having been considered in relation to the whole with the object of giving one impression, that of colossal size. The building depends for its effect, as it should, on its proportion and the disposition of its masses, rather than on any decorative treatment, but Vanbrugh, with all his good qualities, failed, for he committed the fundamental error of treating architecture as scenery, obtaining pictorial effects at the cost of convenience. And, to quote Mr.

Belcher, "it should be noted that there is a point beyond which the mind is not so much impressed as depressed by mere size."

At Blenheim, under Vanbrugh, worked Nicholas Hawksmoor, a pupil of Wren, and one who had worked with the latter on the library of Queen's College. From both Hawksmoor learned much, knowledge of detail from Wren, and love of great scale from Vanbrugh. About the time that Blenheim was being built, Hawksmoor was designing and carrying out the front quadrangle at Queen's, and, with the assistance of Vanbrugh, the Old Clarendon building.

The front quadrangle of Queen's College, including the hall, chapel, and the High Street front, is the best example of Hawksmoor's work. The High Street front is an excellent piece of blank wall treatment, prominence being given to the central entrance by means of the cupola which protects a figure of Queen Anne. In the quadrangle there is some lack of connection between the wings and the central block which is carried out on the colossal lines Hawksmoor acquired from Vanbrugh, being treated with a great Doric Order. In the wings, the panel treatment, by which two stories are included in one, may be noted. The interior of the chapel (which is placed to the east of the hall and has a semicircular apse), treated with Corinthian pilasters, is somewhat less heavy than that of the hall, in which a ponderous Doric Order is used.

[Photo. J. R. Wigfull [A.].

All Souls College: Gates.

The exterior of the Old Clarendon building is also treated with a single colossal Doric Order,* and the windows flanking the portico are inclosed in panels. It is a simple, straightforward, well-proportioned building, and its great scale quickly makes the flippant spectator, who would smile at its windows arranged between the triglyphs, realise his own insignificance. There is some excellent panelling in the interior, and the beautiful gates were possibly the work of Tijou.

In St. Michael's Street is a house called "Vanbrugh's House." Its connection with Vanbrugh is somewhat vague, but it certainly reminds one forcibly of his style and of the Old Clarendon building.

The best work of Hawksmoor in connection with All Souls College was his answer to the

* The lower diameter of these columns is about 4 ft. The lower diameters of the columns of some Greek buildings are as follows:—Temple of Jupiter Olympius, Agrigentum, 13 ft.; Temple of Jupiter Olympius, Athens, 6 ft. 4 ins.; Parthenon, 6 ft. 3 ins.; Temple of Diana at Ephesus, 6 ft.

Fellows when they proposed to rebuild: "What I am offering at in this Article is for the preservation of Antient durable Publick Buildings, that are strong and usefull, instead of erecting new fantasticall perishable Trash, or altering and wounding ye Old by unskilfull knavish Workmen." He then proceeded in 1716, as if to demonstrate the advisability of leaving the old work alone, to erect a terrible attempt at Gothic in the north quadrangle. The towers on the eastern side are about as bad as they could be. Their faults are so obvious that it is quite unnecessary to mention them. The cloister opposite the towers is a curious combination of classic and Gothic erected in 1734, but the gates, which seem to be rather later than those of the Clarendon, are remarkably beautiful. The fine classic interior of the great Codrington Library, completed 1760, comes as a surprise, for one can find no exterior to correspond with it. The hall was originally built across the east end of the chapel, and is so shown in Loggan's view, but it was rebuilt in 1729 in continuation of the chapel.

(To be continued.)

THE APPLICATION OF GEOMETRY TO POINTED ARCHITECTURE.

By G. S. Aitken (Edinburgh).

THERE appeared in the Institute Journal for the year 1910* an article by the present writer, on the Application of Geometry to Greek Architecture, in which it was shown that angles of 45°, 30°, and 22½° were employed to define the outlines of the ancient temples and other buildings. It was further proved that lines drawn from the stylobates to the entablatures at certain angles, divided by the number of columns on the façades, determined their diameters.

As it seemed reasonable to suppose that a similar system was employed in Pointed architecture, the writer decided to test the three examples of Holyrood and Paisley Abbeys and Glasgow Cathedral, drawings of all of which were available for the purpose; the latter by the courtesy of Mr. Oldrieve of H.M. Office of Works. Selecting the angle of 60° as by tradition having the best claim for use, the inference was found to be correct.

It is not, of course, assumed that the designers of these buildings employed the angle for any other purpose than as a guide in the process of designing. Let us suppose then that this angle, used in the same manner and to the same end as those employed in classic architecture, was used in the present case to determine the height and width of a cathedral instead of the proportions of a façade. In doing this with a section through Holyrood, we find that it fixes the height as from floor to nave parapet level, and the width as from outside to outside of nave walls.

At Glasgow and Paisley the heights are as at Holyrood, while the width of Glasgow is from the centre of the nave wall to the outside of that opposite, and Paisley from the inside of the nave wall to the outside of that opposite. It need hardly be pointed out that as these lines were lengthened or shortened the height would be greater or less, and the width increased or contracted.

The next step necessary was to determine the triforium level and the widths of the nave bays. In Holyrood, Glasgow, and Paisley, this level is fixed by dividing the 60° line into two halves, the lower half giving the desired level, from which another 60° line is drawn parallel with the nave walls to the top of the future column bases, which we assume to have been provisionally designed for the purpose. This line divided by the number of intended columns furnishes their diameters. At Holyrood, the number is that of the columns; at Glasgow, the number of columns and responds; at Paisley, the division is into eight, the normal number of bays in a cathedral or abbey nave, which in this case must have been restricted to six as sufficient for the circumstances. The *nave* column line of Glasgow extends from *floor* to triforium, and is divided into seven, this being the number of columns and responds.

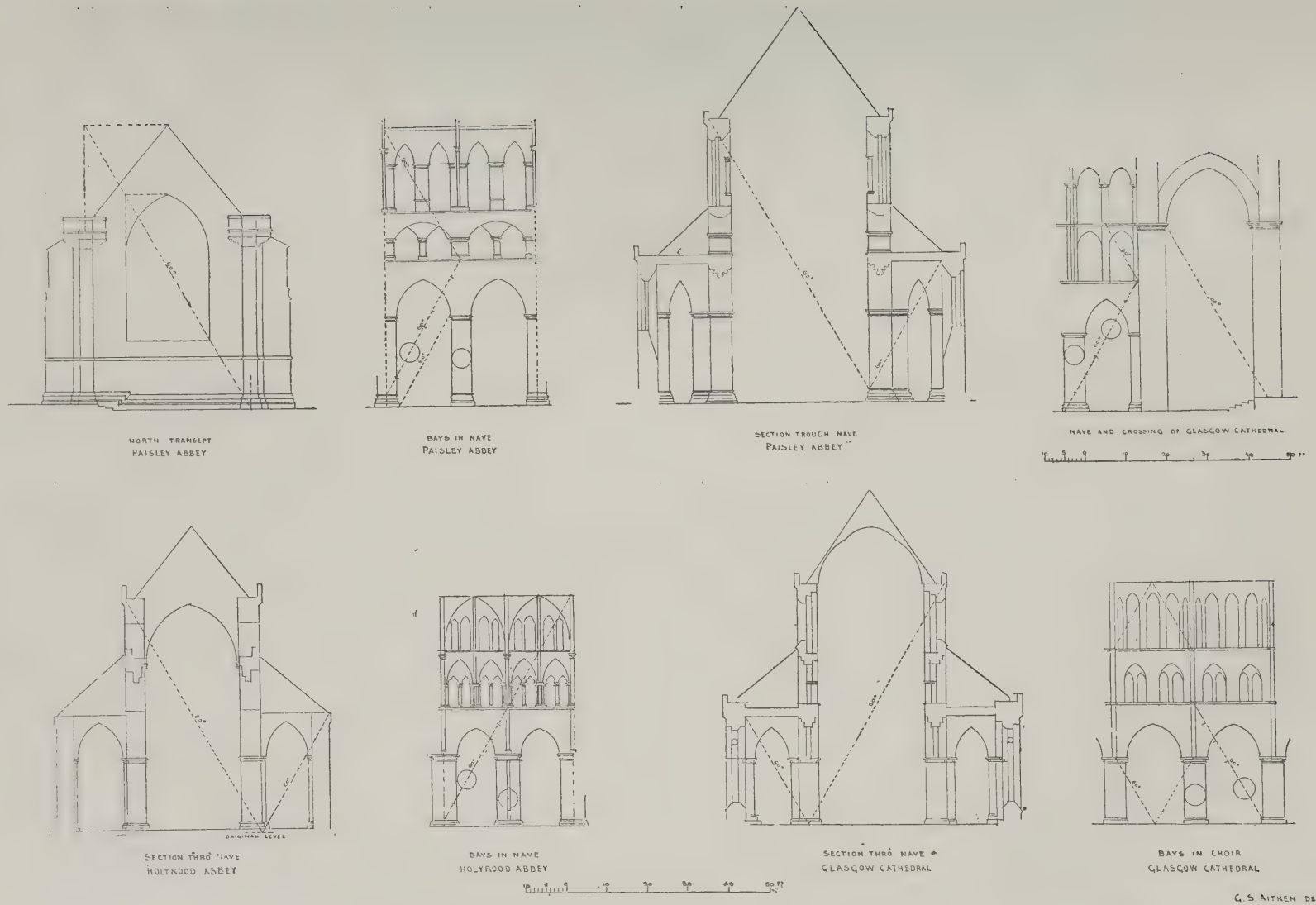
The width of Paisley crossing is fixed as from the inside of one pier to the centre of that opposite.

The clerestory sill level at Holyrood is found by dividing the height from the triforium to the parapet into two. At Glasgow and Paisley the levels are fixed in a more arbitrary manner, except that of Glasgow nave, which is determined by the intersection of a 60° line with the centre of a bay.

The heights of aisle vaultings are settled by a 60° line starting from the bases of the nave lines and extending to the outside of the aisle walls at Holyrood, and the inside of the aisle walls at Glasgow and Paisley.

The north transept exterior of Paisley and its fine window are defined by a 60° line; and it may be added that many subordinate parts of Glasgow Cathedral which occur in the crypt and elsewhere are also so determined.

* Journal, 11th June 1910.



THE APPLICATION OF GEOMETRY TO POINTED ARCHITECTURE

MODERNISM AND AUTHORITY IN ARCHITECTURAL DESIGN.

By W. Howard Seth-Smith [*F.*].

Read before the Birmingham Architectural Association, 9th February 1912.

AS Englishmen we rejoice in the liberty which the Renaissance and Reformation purchased for us, and see reflected in the diversity of sect the beauty and variety of the human mind, and the value of each in giving expression to some particular truth which, though possibly one-sided, needs emphasis. This diversity of mind has its counterpart in art, and its expression in schools equally varied, but all giving point and force to some phase of human emotion, and, as a result, delivering us from bigotry and intolerance. This attitude is peculiar to the Anglo-Saxon race. As Prof. Flinders Petrie and others have well said, the only bad art is that which fails sincerely to express individual and national emotion. This definition excludes all mere repetition of past or present forms, without due consideration of their purpose, suitability, or beauty, as such qualities appeal to our reason, imagination, and taste. It also establishes the proposition that the simple cottage, no less than a Parthenon or a Gothic cathedral, may be a perfect work of art, and supports the statement that all striving after mere picturesque effect which does not express and emphasise with due subordination and reserve the purpose of the building stands condemned.

Out of the welter of imitative design brought about by universal travel and profuse illustration, we have emerged to find ourselves pressed to adopt one of two alternative schools of architectural thought—namely, Neo-Classic, or its reaction, termed the secessionist movement, which I venture to term "modernism." I use the term Neo-Classic as having reference to the revived conventional Classic of Greece and Rome, and the term modernism as encouraging freedom to adopt other traditions or none at all. Upon the attitude of all of us, but especially of our students, towards this question depends very largely the future of architecture in, and far beyond, the Isles of Britain, since what we teach and learn here we practise in a world-wide Empire in which our buildings must be the expression of British ideals and British civilisation.

So entirely has Classic design dominated the two most artistic nations, France and Italy, for the last three centuries, that the tradition of Mediæval architecture which arose and achieved its greatest triumph in the former country, has been completely suppressed—one seeks in vain in France to find a satisfactory modern Gothic building. Mr. Reginald Blomfield makes it clear, in his recent scholarly work on the French Renaissance, that since the reign of François I. Classic tradition has been consolidating, and that the tradition of Gothic died out early in the seventeenth century. The reasons given by the Classic school for these two facts are that Classic stood for all that was purest and best in architecture, and that the spirit of reason and freedom which lay at the root of Greek and Roman civilisation, and in its fifteenth-century revival, could best be emphasised in the style which was its original expression. Seeing, moreover, that the Mediæval spirit had passed away, its corporeal expression naturally disappeared. The point I want to raise for the purpose of discussion is: Whether the French, whose example is being followed very generally, are right in pursuing exclusively the Classic tradition; or whether we, who still persist in an eclectic and more empirical course, are more likely to be acting in the best interests of architecture? In the first place we may at once dismiss the question of the evolution of a new style. It is clear to all who have eyes to see that the adoption and steady pursuit of any one style by a large number of architects, acting on right principles, is bound to have this effect. We have only to compare the sixteenth-century Renaissance work in France with that of the eighteenth to assure ourselves of this fact. Modern French architecture is quite distinctive in style; but I submit for your consideration that in some respects the French policy of training in the tradition of a uniform style is a lamentable failure.

The Renaissance movement embodied the idea of individual freedom, and freedom of thought is the root of all progress in art, as well as in other realms of human action. Vital art is the expression of current emotions in architecture as well as in painting, music, and poetry. "Modernism," "l'Art Nouveau," "Secessionism"—term it what you will—in architecture, are nothing more than the exercise of the spirit of liberty. "Authority" is synonymous with academical precision, with dogma. The Anglo-Saxon genius rebels against the tyranny of the latter, and hence the powerful Continental secessionist movement and England's eclecticism. The Classicist ignores nationality and individuality, and aims at a universal expression of one set of emotions in a stereotyped art. The Secessionist aims at liberty, even at the cost of tolerating license. What is to be our attitude towards these apparently antagonistic schools of thought? The history of modern town planning is eloquent in teaching on this subject. The earlier schemes, which sought everywhere to impose a

Classic and strictly symmetrical lay-out, have been abandoned, and the tendency now is to conditioned irregularity.

Let us admit most cordially that no art which is not scholarly can expect to appeal to modern civilisation. This admission excludes all unqualified individuality. As Ruskin has said: "What is needed is not to teach the body of the nation to know something of art, but to teach the artists of the nation to know much of other things. It is not to give an artist's education to the populace, but a gentleman's education to the artist." We said just now that progress in architecture, even a new style, will naturally, and without conscious effort, be evolved conditionally on a body of experts acting together on right principles. What are those principles? They may, we think, be stated thus:—

(1) The thoughtful application of the structural principles on which all great architecture has been based.

(2) A scientific application of new methods of building construction.

(3) A careful observance of the natural laws which govern our design—such, for instance, as the degrees of sunlight, the rigors of winter or the heat of summer, the prevalence of earthquake, etc.

(4) The observance of the æsthetic laws which underlie the design of the greatest works of architecture, such as breadth or mass in form and colour, repetition or rhythm, symmetry or balance, and grouping, proportion of parts, light and shadow.

(5) A rejection of mere decoration which does not express, emphasise, or refine our requirements.

The man who can work on these lines must be a scholar, and if he possesses the instinct of the artist he will be an architect who makes for progress. Let us apply these principles alike to the Parthenon and to Westminster Abbey or any other great Gothic cathedral—buildings which, by common consent of mankind, are masterpieces of our art—and say which tradition, Classic or Gothic, is the more worthy to be revived and followed. You may analyse Sta. Sophia and St. Paul's Cathedral by these laws, and may discover why they too have set the standard of highest achievement, the latter in spite of decorative insincerities. Each of these great works is but the culmination of the continuous and experimental application of these principles over a long period, generally of centuries. In short, they are the outcome of tradition followed by a legion of learned, thoughtful, and free men, who cared more for their own invention and reputation than for that of their predecessors. Many of us have yet to grasp the fact that, while we must have a knowledge of the past, we ought to learn even more from our contemporaries than from the ancients. And I think we shall find that it is to tradition in building construction that we owe progress, rather than to tradition in ornamental expression. The latter has always, and very rapidly, been modified, and even revolutionised, by contact with other decorative fashions. The knowledge of all decorative forms which we possess naturally tends to break down traditional forms, and hence forces us to experiment in new.

May we now glance at modern work and endeavour to see how far the academician on the one hand, and the secessionist on the other, are following these principles, and with what result? We may take it for granted that, notwithstanding the immensely more complicated nature of modern requirements, simplicity of arrangement in the plan is still attainable, and the elevations of such a plan are capable of equally good treatment, whether controlled by Classic symmetry or by the Gothic spirit of freedom. I hope, moreover, that I shall be supported in my proposition that architecture (apart from decorative forms) has comparatively little to do with the religious, social, and political conditions of the age in which it flourished, notwithstanding that these sentiments and enthusiasms may have produced the need for the buildings themselves, and, by dictating the accommodation, have set constructive problems for solution. No one can reasonably hold that these conditions were even approximately alike in the age of Pericles or Augustus or Constantine, and those of the Italian or French Renaissance, although the principles of design adopted were the same in both periods. Nor is it logical to argue that if we elect to base our modern ecclesiastical design on Gothic tradition we shall (notwithstanding the totally different ideals of to-day) fail to produce works of equal merit. Such buildings as the Houses of Parliament and the new Liverpool Cathedral, and many churches of less pretension but of equal merit to the latter, directly contradict such an assumption. It is paradoxical, but true, that the Mediæval age, free and flexible in its architecture, was pre-eminently that of religious authority and dogma, and that the ages of Classic and Neo-Classic, which represent convention in architectural form, were those of intellectual freedom. Compare the symmetry in plan of a great Gothic cathedral with that of a palace like Blenheim or Castle Howard; in the former the spirit of freedom has met a most complicated problem with symmetrical perfection, while the hide-bound Classic has sacrificed the essential needs of domestic convenience to the dogma of infallible symmetry. The symmetry of the cathedral recalls the form of a beautiful tree, one in which the opposing natural forces have resulted, not in rigid uniformity, but in a balance so beautiful and full of interest as to compel us to draw it. Why is it that this impulse seizes us when confronted with a building treated in the Gothic spirit—but seldom otherwise?

We will now briefly review some work of those who have rebelled against Classic authority. In Germany a very formidable movement exists which has seceded altogether from academic teaching, and some of the work produced by the more able and more moderate spirits in the great German towns

is full of promise. It is suited to its purpose, good in its proportion, broad and dignified in its masses and outline, picturesque, balanced in light and shade, refined and expressive in the character and reserved in the distribution of its ornament—in short, it manifests all the qualities of good architecture. In the architectural schools connected with the universities of Germany the best practising architects of the day are the professors of architecture, and among them are apostles of this secession. Everywhere in the main towns may be seen this impatience with academic design, a thoughtful optimism and courage in the adoption of new forms suited to new materials; and while we must lament and condemn its abuses, we must freely admit its virtues. This movement has also largely leavened architecture in Austria, Scandinavia, and Finland. Why is it that the works of the moderate and scholarly men of this school at once arrest and hold our interest? In some instances they do not appeal to us as being beautiful, but they are thoughtful and inventive. Is it not because they express individuality as well as knowledge, and a preference for national tradition? And there is no reason why this modernist school should not, at a later stage, evolve great works of combined art and science. In the case of the conventional school the mind is unable to foresee any further progress than a skilful shuffling of historic features, which may have the merit that they do not shock or offend cultivated taste, but which arouse no enthusiasm, express no modern sentiment, and have long lost their own.

I venture to submit to this meeting that the secessionists, as represented by their more scholarly and moderate men, are working on the lines which produced all the architectural masterpieces in the Western world, and that these masterpieces were not isolated efforts of an individual, but the result of a band of masters working on the same traditional lines, both constructive and ornamental, not copying architectural features, caring only for that which interested them most in the creations of their contemporaries, and endeavouring to improve upon it. It was all they knew, and quite sufficient for them. It only remains for this school to persist, and we are sure to get a living and beautiful style of architecture. Ruskin's teaching may not always be reliable as applied to architecture; but happy the artist who has once revelled in the thoughtful and poetic spirit of that great teacher, and happier still the architect who has been trained in the traditions of Mediæval architecture. Once a master of this tradition, and the mind never again can be closely tethered to the area of conventionality. He may gravitate towards greater severity of form, but his work will manifest individuality, and he will never be guilty of sacrificing the picturesqueness which so pre-eminently suits our Northern character and environment, and without which our streets, and especially our skylines, become so painfully monotonous and unimpressive. What would our villages be without their Gothic parish church and their Elizabethan manor-house, the City of London without its towers and spires, or Westminster without its Parliament Houses? And why is it that an architect well trained in the Gothic school can effectively practise in Neo-Classic, while the man whose education has been exclusively Classic cannot design decently in Gothic? Wren, for instance. It is this feeling for picturesqueness which, more than anything else, embodied the Anglo-Saxon genius in Wrenian architecture—the Mediæval spirit engrafted on the Palladian stock. Shall we abandon the tradition which gave us our cathedrals and parochial churches, the towns of Oxford and Cambridge, Rothenburg, Hildesheim, and Chester, or a Haddon Hall, Hatfield House, and such-like architecture? And how can we reconcile this eclectic practice with the essential need of continuity of one tradition, held and exercised by a large school?

It was the dread of Classic uniformity which led me to suggest this subject when requested by your President to read you a paper. Do not suppose me to hold an exclusive brief for Mediæval art. No man knows better than I how to appreciate the fine Classic designs of all countries and all periods, including present-day Georgian; one recognises its impressiveness as applied to important civic and monumental purposes. I deny, however, and most emphatically, that it should be allowed to monopolise our studies and control our practice to the exclusion of styles which, after all, handled with skill, are more flexible and versatile in solving the complicated problems of modern civilisation and our religious ideals, and which, moreover, are distinctly English in origin. Did any attribute of greatness in Greek work—dignity, symmetry, rhythm and proportion, light and shadow—ever rise higher than in a Gothic cathedral? Is there no ordered and organic thought, no reserve or restraint, in Sta. Sophia or Rheims Cathedral? Surely we have in these buildings fine planning, fine proportion, fine scale, mass and simplicity in phrasing, and selection in ornament: qualities often quoted as exclusively characteristic of, and supporting the claims of, Classic. We admit the "purity" or refinement of Greek ornament, and it is therefore an essential subject for study; but we must recollect that Greek architecture, as regards its plan and construction, was the most elementary of all great European styles, and, therefore, is least adaptable to modern requirements. In Byzantine times, however, under the inspiration of Roman constructional methods, the Greek genius for beautiful form reversed the curves of the ancient capitals, threw to the winds the Periclean ornament, and devised something equally beautiful. The quality of exact symmetrical planning may be suitable in monumental architecture, but we know the absurdities to which it

inevitably led Vanbrugh and his school in devising the great houses and palaces of the nobility; and all of us who have set ourselves the problem of designing a good country house strictly on these principles, know also that it means sacrifice of comfort and convenience internally, and often of beauty.

We see this standardising tendency in those who wish to model our schools of architecture on the lines of the French schools. In these French schools no encouragement is given to Gothic architecture, and we have already commented on the evil effect of this scholastic intolerance on the vast amount of work in France which is the main expression of the domestic, educational, and religious character of the nation, and which constitutes the life-work of the vast majority of architects. Everywhere throughout France one sees in modern domestic work its baneful effect in a pretentiousness born of the academic and monumental system of training. The Neo-Classic style is not plastic enough to be suitably applied to humbler and rural architecture, excepting in the freest manner, such as is exemplified in our brick houses of the Queen Anne period. In our more important works I am convinced that in the future our architectural schools must devote far more attention to scientific building construction, for in that, as in the history of the past, lies the basis of fresh development of architectural form which shall be free from all affectation and insincerity. Steel and ferro-concrete are to play a great part in the future of our art. These new methods must be studied closely and adopted frankly where they facilitate our purpose or economise our means. We are not ambitious to see the streets of our great towns lined with the "skyscrapers" of New York fame; but we cannot deny that here at least is a perfectly new style of architecture, full of intense interest, and, in the best hands, treated not only with sincerity, as expressive of their purpose, but often with considerable beauty, and largely free from all traditional ornament. They are the outcome of the special conditions applying to the limited land of New York; they afford a lesson rich in teaching to all of us, and we commend them to the consideration of our municipal authorities, as probably modifying their by-laws in the future, as the land in the centres of our great commercial cities becomes more and more valuable. These steel-frame and ferro-concrete buildings are the product of an exact science of construction, and the carcase can only be designed by engineers, who have a full life-work in mastering the mechanical problems. It is as obviously impossible for the artist to master the mathematical science required to construct such a building as for the engineer to become such a master of beautiful form as, with the magic wand of the artist, to make it a thing of beauty. I claim even for a "skyscraper" the possibility of the possession of all the characteristics constituting good architecture. It is one of the most interesting architectural problems of the age, and is bound to affect architectural study and practice throughout the world. The language of engineering is the language of reason; that of architecture is the language of feeling for beauty. Reason and beauty surely form a happy co-partnership?—a marriage which is the parent of architecture, and one which may, in the near future, be expected to affect the constitution of our larger office staffs, as it has done in America. Within the last ten years we have vastly improved and systematised our methods of education, and happily, on the whole, we seem to be proceeding upon lines characteristic of our British independence of foreign ideals.

That the Education Board of the R.I.B.A. is doing excellent work is evidenced by the recent changes in the syllabus of studies recommended for the schools throughout the Empire in preparation for the Institute Examinations. Examinations wisely controlled are highly useful in systematising study, and we have not only accepted the proposition that the training and examination of architects should be in the hands of practising architects, but, generally speaking, our universities as well as our other schools of architecture have endorsed this proposition by adapting their syllabuses to these progressive examinations. This Board is composed of architects who have not only attained eminence in practice, but have had experience as educationists, and their scheme for co-ordinating the training should be, and I think is, based on the following principles: (*a*) Above all things to teach the student to observe, think, and invent, rather than to cram and copy. (*b*) That a sound general education should precede entrance to professional training. (*c*) That the course of instruction should be progressive, commencing with elementary design and construction, and leading up to an honours, or post-graduate, qualification. (*d*) That the intimate association of construction and design, as exemplified in the history of great architecture of the past, and inculcated by means of the school *atelier* and lecture-room in close co-operation, should be insisted upon throughout—good design and draughtsmanship being emphasised as essential elements of architecture. (*e*) While the school course must necessarily be largely general and theoretical, the office course should supply the more practical part of the training, but every encouragement should be offered to advanced students to specialise. Such educational principles ought to command the confidence of all the schools, but they clearly controvert the theory of training exclusively in Classic, or of encouraging the students to commence their course with advanced monumental design.

It only remains for me to plead that in these schools of architecture we should insist that encouragement be given to the study of Gothic and

English Renaissance, as well as to Classic. In ecclesiastical work the former tradition has, with the exception of a comparatively brief period, been continuous in this country, and has of late been revived with extraordinary success. Church building is as active to-day as it ever was, and very beautiful and original work is being done by our best men all over the country. We feel that it would be nothing short of a disaster to art were our schools of architecture to cease to encourage special training in this style. The only argument which can be advanced in opposition is that in view of the complex requirements a student has no time for both. Our reply would be that in every approved system of education the elementary training is wide and precedes the more advanced—the general, the specialised—and that following this common-sense and universal principle, the early courses in our architectural schools must make the student acquainted with the principal English styles in a general way, leaving him to follow his inclination or opportunities to specialise later on. If the office in which he is articled does not lead to specialisation, early practice will do so, accordingly as he is commissioned for domestic, ecclesiastical, or civil work. Under this educational system a large number of men will be found to be carrying on the traditions of each of the following styles: say, Mediæval for churches; Tudor, Elizabethan, or Queen Anne for domestic work; Georgian for civil. By instinct and by training they will be specialists, just as medical men, lawyers, and other professional men group themselves and specialise in various departments of knowledge and experience. Specialisation is the only logical and practicable solution of the multifarious demands of a complex civilisation.

There is no fear of failure so long as our architectural societies encourage and our schools proceed on the right lines. They must insist, and always, on a progressive training which enables them to design a simple cottage or village hall with enthusiasm and delight. We are too hasty, too diffident, too pessimistic. Such a system of professional training has characterised our English schools so far, and is perfectly consistent with a higher course (either at home or in Paris, Athens, or Rome) to fit men, who can afford the time and means, for designing on a monumental scale. A large majority of our students will not be able to take this special course, and, seeing that the same general principles of design apply to all classes of practice, the men who have devoted their whole course to the mastery of less ambitious studies will do their special work all the better, and the more advanced men will, of course, generally carry off the plums of practice, whether by special appointment or in competition. We would offer one other note of warning—namely, that non-university schools of architecture, while endeavouring to raise the standard of their students' general education before entering upon professional training, should be careful not to exclude men whose special conditions may have deprived them of this advantage, and yet may be brilliantly endowed for our calling.

In an early part of this paper I touched on our Imperial responsibilities, and it is a question worth the consideration of our teachers whether those who, English, or natives of our dependencies, have decided to seek their fortunes abroad, say in India and Egypt, should not be able to take a special course in Oriental expression, and thus be fitted to combine the constructive principles of the West with the indigenous forms and traditions of the East. It would be as impolitic, as inconsistent with our past and present policy, in the various spheres of our influence in India, Egypt, China, and elsewhere, to force an exotic and Northern style on these countries. Our policy should rather be to study and adopt all that is suitable in their indigenous architecture, yet giving it the impress of our freedom of thought and the impetus of our vastly superior structural methods. True, it will not be Indian or Chinese architecture, but, like that of Sicily, it will be the permanent and eloquent record of our influence or dominion. In the light of these responsibilities we commend to all English architects the study of the Norman-Saracenic architecture of Palermo. In a recent issue of the *Builder* the following note occurred: "In a country as vast as the East Indies it is inevitable that the native traditions of workmanship and decoration must be relied on in the execution of the great majority of the buildings undertaken, and if these conflict with the conception of the architect the result cannot but be chaotic and unsatisfactory. We ought, therefore, to recognise native workmanship as an essential factor, and as there is a strong and definite artistic tradition, with numerous skilled exponents still in existence in the East, the imported architect will achieve far finer results by basing his conceptions on this than by trying to impose alien and exotic forms on the native craftsman." Native schools of architecture are certain before long to be formed in India, China, and the Colonies, for which, at any rate for a time, English architects will probably be appointed the professors.

To sum up. Modernism—the spirit of freedom—is the driving force of all growth and progress. Scholasticism or tradition is the element of law and order which is essential to curb ignorant and unbridled individuality—that anarchy and chaos which is responsible for all the architectural monstrosities which have ruined our towns and villages, and which our curious popular English aversion to experts tends to encourage. "Excessive individualism means energy without order; excessive socialism, order without energy." It is the task of our professors to teach the true relationship of these complementary forces. Let us neither encourage the monotony of cultured mediocrity nor endure vulgar originality.

THE ACADEMIC IN ARCHITECTURE.

By A. E. Richardson, *Licentiate.*

THERE are those in our midst whose vision of architectural development is bounded by their immediate environment; they cannot discriminate between the real and the evanescent in passing fashion: neither can they realise that spasmodic flights of originality result in further enmeshment in the net of vulgarity and affectation. That there are earnest students of architecture, however, the existence of our leading schools sufficiently proves, and it is to the painstaking students of to-day, the leaders of architectural thought of to-morrow, that the evolution of an academic tradition makes the most direct appeal. In the growing desire for the academic is discernible a return to that disinterested search for perfection which produced the marvellous art of antiquity, that high sense of reasonableness and restraint, and moreover a love of definition and continuity. From the vantage point engendered by the classic spirit the student is enabled to criticise modern architecture at its proper value; he realises that the critical faculty is of lower rank than the creative; he employs his criticism not to applaud or abuse, but to appreciate merit and to intellectually remedy obvious defects. When a work of art approaches the classic ideal it ceases to be novel or remarkable; what is more important, it becomes grand and permanent, it attains to the sublime and the monumental.

The academic in architecture is the result of disciplined endeavour; individuality is checkmated, and the imperceptible fusion of many intellects results in the work of art seeming to be the product of a gigantic hand. Then again, the academic depends on a sound knowledge of tradition; without that subtle connection with all the noble and glorious works of the past, bringing in their train memories redolent of sweetness and beauty, the mind of the designer would be unfertilised.

Contrary to prevalent opinion, originality and individuality do play a part in the development of the academic; as component attributes their presence is inevitable and welcome. The inventive faculty is strengthened by contact with tradition, the old truths and beauties are brought out again in stronger relief, and they are displayed in the garb of modernity. Marcus Aurelius in his meditations states: "Ever to mind and consider with thyself, how all things that now are, have been heretofore much after the same sort and after the same fashion that now they are: and so to think of those things which shall be hereafter also. Moreover, whole dramata and uniform scenes, or scenes that comprehend the lives and actions of men of one calling and profession, as many as either in thine own experience thou hast known, or by reading of ancient histories (as the whole court of Adrianus, the whole court of Antoninus Pius, the whole court of Philippus, that of Alexander, that of Crœsus); to set them all before thine eyes. For thou shalt find that they are all but after one sort and fashion, only that the actors were others."

The nearer the academic approaches the Hellenistic in spirit, the more surely it connects with the breadth of view and widened horizon consonant with the life of the senses and understanding. The classic standpoint has nothing in common with mistaken pedantry; it never encourages a mere reproduction of the forms of antiquity, or permits a masquerade in antique garb: its purpose is to elevate the kindred arts, to uplift and to ennoble mankind. The exponents of the academic, seeking for inspiration, have the architecture of the world to draw upon; it is of no consequence to them that petty barriers and frontiers of diverse styles exist to impede progress. The greatest living French architect, Jean Louis Pascal, recently said, "the architecture of the whole of the civilised world is fast merging into one distinctive style with the architecture of antiquity as the root principle."

During a recent visit to the Liverpool School of Architecture, nothing arrested my attention so forcibly as the fact that the School already boasts a tradition. The evidence of this was revealed, not in the exhibition of magnificent drawings so much as in the earnestness of the students. Organisation and the pursuit of a definite course of study have produced splendid results, both in architecture and in town planning. The School as at present constituted is a miniature "Ecole des Beaux-Arts." A prejudiced visitor, in a mood of persiflage, described the scope of the designs as approaching the sphere of scene painting. No better compliment could have been paid, for is not conventional scenery the most difficult of execution; does it not call for those imaginative qualities which distinguished the careers of Wren, Vanbrugh, Chambers, and Cockerell? When it is considered that the studies of the students are directed to the masterpieces of foreign architecture, as well as those of their own country, the wisdom of such a policy becomes clear. Is it not of supreme importance that a knowledge of the methods of Schinkel, Duc, Duban, Pascal and McKim, should be added to our insular ideas?

The Town Planning Review for July—an excellent and lavishly illustrated number—contains an interesting historical retrospect of Nash's Regent Street by Mr. O. Newbold, the illustrations including, besides present-day views, engravings of parts of the street as it appeared in the days of the Regent. Professor Adshead contributes an article on the Decimus Burton Arch at Constitution Hill, and one on Fountains, being the sixth of the series on "The Decoration and Furnishing of the City." Mr. Patrick Abercrombie has three articles: "Brussels—a Study in Development and Town Planning"; "Sheffield under the Town Planning Act"; and "The Many-tentacled Town—the Vision of Emile Verhaeren." Short articles on Features of English Towns are contributed by Messrs. Alwyn H. Holland, A. E. Richardson, and T. Alwyn Lloyd.

INIGO JONES IN HISTORY AND TRADITION.

By HARRY SIRR [*F.*], *Inst. Medallist* (*Essays*) 1883.

INIGO JONES is fittingly mentioned and associated with some of the royal works incidentally referred to by our master historian of the seventeenth century in the presentment of national history leading up to the Commonwealth. Thus, Mr. Gardiner notices that Denmark House and St. James's were ordered to be made ready "by the skilful hand of Inigo Jones" in preparation for the Infanta's reception in 1623. A few years before this, after recovery from illness, James I. remained a single night at Whitehall in passing through London, and Mr. Gardiner doubts not that "he found time to look at the works which had been commenced under Inigo Jones." The stately Banqueting House which had been erected in 1606 had just been burnt down, "and James, whose designs had risen with his fortunes, now thought of nothing less than of replacing the whole palace by a splendid pile which would be worthy of his exalted dignity." The last mentioned of Jones in *The History of England*, 1603–42, connects him with the work at Old St. Paul's, where briefly the royal interest and substantial gift are touched upon.

It is common knowledge that Jones was an inmate of Basing House with the Marquis of Winchester during the siege; but the story of his treatment after the storming, 14th October 1645, is not generally known. Mr. Gardiner says—in *The History of the Great Civil War*—that the rage of Cromwell's soldiers turned to thoughts of booty, when the men who were spared were stripped of their outer garments, "and old Inigo Jones was carried out of the house wrapped in a blanket, because the spoilers had left him absolutely naked." Basing House had held out since August 1643. It is thought that it was probably just before that date that Jones and Nicholas Stone, according to a tradition preserved by Vertue, buried their stock of ready money in Scotland Yard; but "there being an order come out to reward informers with half, four persons knowing the place, it was retaken up again and buried in Lambeth Marsh." Contemporary confirmation of the place of first concealment and of the knowledge possessed by informers strengthens the remainder of the tradition—the part about the burial in Lambeth Marsh—and can now be pointed to in *The Calendar of Proceedings of the Committee for the Advance of Money* under date 9th January 1646—"Information of goods, plate, money, &c., belonging to him concealed in his house near Whitehall or in some rooms in Scotland Yard belonging to him." On the 25th April 1645, an order had been made about "the waggons seized at his house," so that it is clear there had already been a superficial raid on the premises. Now, on the 12th January 1646, an order was issued "that his house be visited and the goods seized, sequestered and inventoried." The information, apparently very belated, doubtless led to a disappointing search. There is nothing further on record. It is a conclusion altogether reasonable that Jones had taken the steps recounted by Vertue with the object of outwitting any possible informers. Jones must have become very weary of all forms of molestation. On the 7th March he applied to compound for delinquency in absenting himself from his house three and a half years. Entries from "The Calendar of the Commissioners for Compounding" have already been cited in *The Dictionary of National Biography*. He discharged all the pecuniary obligations imposed upon him and received his pardon 2nd July; an order was made for the restitution of his estate, and he was consequently free to bring back to his house any of his belongings.

Not all tradition can be so well corroborated, but this attempt to reconcile the tradition received from Vertue with discoverable contemporary records may help to dispel any fear that there is no substance in other traditions which cannot be corroborated at all, though handed on by authority equally credible.

Amongst the buildings which have been attributed to Jones with very slight authority *The Dictionary of National Biography* has included the bridge over the Conway at Llanrwst and the Gwydyr Chapel in Llanrwst Church, the former on the authority of Cathrall, 1828, and the latter on the authority of Wright (*Scenes in North Wales*), 1883. Were these attributions solitary or the earliest to be found one might be disposed to disregard them. *The Architectural Dictionary* classes both the bridge and the chapel with works which were probably designed by Jones. It may be assumed that Mr. Wyatt Papworth had a great deal to do with this classification, and his opinion cannot lightly be disregarded. Nineteenth century authorities are cited, but a reference is given to a work entitled *Artists in Ireland*, 1796, by Pasquin, who puts the date of the bridge at 1595, and says that it was built for Sir John Wynne. His account of Jones is unworthy of serious attention; his curious story is not even repeated.

It is interesting to find that Smiles (*Lives of Engineers*, 1861, vol. i. p. 251), discoursing upon the period when the bridge was built, observes that no architect of eminence devoted himself to bridge building, and that, although Inigo Jones furnished the design for the bridge of Llanrwst in 1634, it was a work of a comparatively unimportant character and the only one of the kind on which he seems to have been employed. Also that, on the whole, the design was of a very modern character, and was probably adopted to a considerable extent as a model by succeeding bridge builders. The work, however, seems to have been so badly done, says

Mr. Smiles, that it was soon found necessary to rebuild one of the arches, and to this day the bridge is known as "the shaking bridge." "In the neighbourhood the people have considered this a merit, attributing the shaking to the very nice principles on which the bridge is built. That the bridge should shake or rock could have formed no part of Inigo Jones's design, and that it stands at all must be attributable mainly to the fact of its foundation being upon a rock, which cannot be undermined and washed away." It may be noted that Cathrall states that the bridge was built in the year 1636, two years after the supply of the design according to Smiles. Baldwin's *Itinerary*, Hoare, 1806, states—"The bridge, which has generally claimed Inigo Jones for its architect, is so peculiarly constructed as to shake, whenever a person pushes his back against the centre stone."

Bridge over the Conway at Llanrwst, attributed to Inigo Jones, *c.* 1636.
From an engraving in the British Museum.

An earlier authority for the traditions which connect Jones with the bridge and chapel is the scarce first edition, 1770, of a work well known to Welsh historians—*A History of the Gwedir Family* by Sir John Wynne (who was born 1553 and died 1626), with an Introduction and Notes by Daines Barrington, a man of some eminence who became a judge and also held various public appointments, a devoted antiquary and reliable. He infers that Jones was at least much patronised by Sir John Wynne as well as by his sons. Sir John erected some almshouses at Llanrwst in 1610, to which he gave the name of Jesus Hospital; and he built a new house, an event of some consequence in the life of such a man, who seems to have lived in retirement, but the chief reason for mentioning it, Barrington explained, arose from the possibility of its having been designed by Jones in his first manner before he had been to Italy, "as the style of it is rather singular."

Barrington relates that it was universally believed in the neighbourhood of Llanrwst that Jones was born either at that town or at Dolwythelan, situated equally near the estates of the Gwydyr family, and that it was traditionally supposed he was baptised Yny^{r}, which he changed for Inigo after travelling in Italy. It was likewise a part of the tradition that he was patronised by the Wynns of Gwedir, or Gwydyr, and that he uilt Plastêg, belonging to the Trevor family, on the road from Wrexham to Mold. Barrington himself believed that Jones, on his second visit to Italy in 1612, might possibly have travelled under the protection of Sir John Wynn's eldest son, John, who died at Lucca in that year. Then Barrington mentions that Sir Richard Wynn built the bridge over the Conway in 1636, and in 1633 the chapel at Llanrwst Church, and that both were considered to be works of Jones. To this may be added that Sir Richard Wynne was Groom of the Chamber to Charles I., and subsequently Treasurer to Queen Henrietta.

This *History of the Gwedir Family* having become scarce, a new edition, still with Barrington's Introduction and Notes, was published by subscription in 1827, with notes of interest by the editor. He mentions the late Mr. Wynn of Bodscallon, "who was possessed of several anecdotes relative to Inigo Jones," from whom one was received that Jones was employed by Queen Elizabeth in repairing one of the piers of London Bridge, which gained him repute, after being recommended by Sir John Wynne. He also states as to Llanrwst bridge,

" Mr. Panton hath informed me, from the records of the Quarter Sessions of Denbighshire, that this bridge was directed to be rebuilt in the 9th of Car. I. from the Privy Council, Jones being then Surveyor of the Works." It was estimated to cost £1,000.

It is worth while to quote *The Penny Cyclopedia*, 1837, one of the authorities cited in *The Architectural Dictionary*, and it may be mentioned that Llanrwst Church contains a fine late rood-screen. " The Church has little architectural beauty, but the interior has some curious carving said to have been brought from the neighbouring abbey of Maenan, and there is a lateral chapel, ' the Gwedir Chapel,' built in 1633, from a design by Inigo Jones ; but it is much neglected (Pennant). The bridge over the Conway is also from designs by Inigo Jones."

Possibly Jones's father with the same Christian name, whatever its primary form, was born in the neighbourhood of Llanrwst, Denbighshire. The belief that the architect was born there might gradually have come about. According to Wood (*Athenæ*, ed. Bliss, 1820) he was born in London, 15th July 1573, information which tallies with the entry in the register of St. Bartholomew-the-Less, Smithfield, showing that in 1573 " Eneyo Jones ye sonne of Eneyo Jones was XP-ened y^e^ XIX day of July." * There is good evidence of the arms on the original frame of the Houghton portrait of the architect, and these were borne by a Denbighshire family of the surname. The substance of the tradition concerning the bridge and the chapel remains : it is highly probable that the architect's family originated in the neighbourhood and that the Wynns were interested in young Jones. The landed property was long the patrimony of the Wynn family.

The accompanying view of Llanrwst Bridge in 1800 is reproduced from an engraving in King George IV.'s collection by B. Comte after a drawing by Laporte.

REVIEWS.

LONDON.

The Making of London. By Sir Lawrence Gomme. 8*vo. Lond.* 1912. 3*s.* 6*d. net.* [*Henry Frowde, Oxford University Press, Amen Corner, E.C.*]

This is a small volume, but it is packed full of information clearly and interestingly told. On every page there is evidence of the most careful investigation, of the accumulation of valuable facts, of a trained mind brought to bear upon complex historical problems, and above all of the enthusiasm of a lover of London working *con amore*.

Those who are familiar with Sir Lawrence Gomme's larger work *The Governance of London* will appreciate the line of argument here pursued. This is not a repetition or a synopsis of the former, but rather complementary and auxiliary, and complete in itself. The author emphasises, and I think rightly, the value of tradition and custom as elements of history, and utilises all that archæology brings to the understanding of the making of London. Probably there is no city in the Kingdom so rich in traditions and records and archæological discoveries as London, and if this book succeeds in stimulating the study of these subjects in their continuity, I have no doubt that the author's object will have been largely gained.

Many books have been written on London, familiar more or less to us all, for which old John Stow's *Survey* has been an invaluable quarry : but Sir Lawrence has struck out a path for himself which is not hard-trodden ground. No one can rise from a careful perusal of his book without feeling a great pride in the evolution and growth of London ; in it we clasp hands with the Romans, who had made it then a place of importance and wealth, with a strong civic life which it maintained through all subsequent vicissitudes during Saxon, Norman, and Plantagenet times, each enriching and stamping it with its own indelible mark. Beginning as a Roman imperial city, it became a Saxon imperial city, and ever since it has been imperial by virtue of its history, its noble traditions, and its importance. A city, however, cannot remain imperial on its history and traditions alone ; it is amazing how little a Londoner knows about his London, and how little he cares about it, and it is still more amazing how little the Imperial Government does for it, and how niggardly it is in everything that concerns the improvement and beautifying of our capital. Paris, Berlin, Vienna, Rome, Washington, are all the especial care of their Imperial Governments, and money is lavished on them to make these capitals worthy of the name. London as being the capital of the Empire should be treated imperially, and almost the entire burden should not be left to be borne by the County. If one result of this book should be to bring about an improvement in this respect Sir Lawrence Gomme will have deserved well of every lover of London.

One of the most interesting chapters is that on Tudor and Stuart London, in which voluminous quotations from tracts and ballads give most graphic word-pictures of the manners and customs of the time, and the well-known proclamation of Queen Elizabeth prohibiting the erection of any more buildings within three miles of any of the gates of the city is given *in extenso*.

The letterpress is supplemented by some thirty-eight illustrations produced in photo-lithography. Most of these are interesting, even if not new, and help to elucidate the text ; but it is to be regretted that ordinary and modern views of St.

* *The Dictionary of National Biography* gives the date 29th July, but *The Architectural Dictionary* correctly gives 19th July.

Paul's, Westminster Abbey, the Houses of Parliament, and the Tower of London, such as are in every cheap guide book, should have been included. Sir Lawrence has himself hundreds of rare old prints of London, and has access to thousands more, the reproduction of any of which would have increased the attractiveness and value of the book. Let us hope that a second edition will soon be called for, and that then the author may see his way to act on the suggestion I have ventured to make.

ANDREW T. TAYLOR [*F.*].

BUILDING TIMBERS.

Building Timbers and Architects' Specifications. By J. Davies. 1910. (7½ *in. by* 4¾ *in.*) 6*s.* [*Alfred Haworth & Co., Ltd.*, 84 *Leadenhall Street, E.C.*]

Though published nearly two years ago, this little volume has only recently found its way to our library bookshelves. We are glad to have the opportunity of offering it a hearty even if tardy welcome as an interesting and very useful addition to the literature of the subjects with which it deals.

Our knowledge of the properties of building materials has made rapid advances of late years, and the architect who would write an up-to-date specification finds that fewer and fewer of the old forms and descriptions, to which traditional usage seemed to have lent undue value, are applicable to present-day requirements. If he is to bring to his work the amount of professional skill reasonably and properly expected of him he has to assimilate the result of the latest analyses, tests, and methods of treating the various materials, and to incorporate these in his descriptions. By degrees the clauses dealing with the principal building materials have been effectively modernised, but those relating to timber seem to a large extent to have escaped revision. The result of this neglect has probably been to give rise to more disputes in regard to this particular material than over any other. For these the Courts and the public are, perhaps naturally, but none the less unfairly, inclined to hold the architect unduly responsible, in that he is often inclined to continue to specify materials and standards of quality that are now virtually unobtainable. Until quite recently the only means an architect had of supplementing his practical experience in these respects was by reference to text-books which, in regard to this material, were generally little more up-to-date than his old specifications. Current information, which the timber trade could have usefully supplied, was not brought under his notice, and of the thousands of catalogues and circulars which deluged his office few if any dealt with the changes which have been introduced into this trade in recent years.

So far as we are aware, the present volume is the first serious attempt which has been made to bridge the gulf that has so long existed between the timber merchant and the architect. It describes in clear language the respects in which old specification clauses are no longer applicable, and why they are useless, if not actually provocative of disputes, and it proceeds to offer workable alternatives. It also gives very useful and practical notes on all the woods in ordinary use, whether for building purposes or for furniture, and in addition mentions many that are now only beginning to be recognised as serviceable or ornamental substitutes for those usually employed.

As a practical work of reference on its subject it should find a place on every architect's bookshelf, and we feel sure that its usefulness will soon repay the cost of its purchase. If it meets with the recognition it deserves, a new edition will doubtless be called for shortly. We should like to suggest that occasion then be taken to remove the wearisome reiteration of the title which occurs at the top of every page, and to substitute a heading which would give a clue to the page's contents. Though it possesses an excellent index, this small change would add considerably to its usefulness for reference.

HERBERT A. SATCHELL [*F.*].

CORRESPONDENCE.

Official Architecture.

Gwydir Chambers, 104 *High Holborn:* 21 *Aug.* 1912.

To the Editor, JOURNAL R.I.B.A.,—

DEAR SIR,—Your readers will be interested in the questions and answers on the above subject in the House of Commons, which are published in the last and present numbers of the JOURNAL.

The admissions of Mr. Wedgwood Benn are striking. The Office of Works has spent £4,066,945 upon new works in the last five years, and £464,493 on salaries; this in one architectural department of the State.

The London County Council's Superintending Architect now controls a staff of over 600 assistants and has been asking for more. Their salaries already amount to over £100,000 per annum.

This "mill" system of official architecture is also in vogue throughout the country, and is extending amongst railway and other large commercial companies. Meanwhile, the private practitioner is contributing in rates and taxes to the maintenance of a system which is gradually absorbing all state and civic architecture, and dependent officials are taking the place of independent artists working in friendly rivalry and healthy competition.

The business aspect need not be dwelt upon, though the absence of a proper check upon the cost of the undertakings does not usually lead to economy. Our last President drew attention to the matter, and it is rumoured that our militant Council has appointed a Committee to deliberate

thereon. One may perhaps venture to express a hope that this Committee will suggest means by which pressure may be brought to bear on members of the Government, the London County Council and the public, and not least on those members of the Royal Institute of British Architects who themselves occupy positions on the various bodies concerned, so as to prevent the abuse of this system.

The atmosphere of officialdom cannot be claimed to be conducive to the advancement or preservation of the glorious traditions of our art.—Yours faithfully,

HERBERT WIGGLESWORTH [*F.*].

"The Improvement of London."

6 *Lancaster Road, Wimbledon Common S.W.*
10*th August* 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—It makes me rather sad to see that no one who notices my suggestions for the remodelling of the National Gallery seems to take any account of what is really the originating motive of the whole idea, viz. the revision of the *plan*. The substitution of a large central staircase for the present absurd jumble of three staircases, and the formation of a large and dignified entrance hall instead of the present lobby (for it is nothing more), is at the root of the whole thing. Also the provision of an axial vista from end to end of the front range of galleries. The exterior treatment suggested all arises out of that.

Mr. Davison's suggestion that the central feature is too large for the rest of the building (he admits that it is not too large for the site) is one to be considered, but that would depend very much on the treatment of the detail; if the detail is kept delicate and refined I do not see that the mere size would be an objection. The dome is not so large in proportion to the portico as it is in Schinckel's Nikolai Church at Potsdam. Of course the result would be that the portico, which is now the principal feature, would become the secondary feature. But nothing will persuade me that the present paltry little dome is a satisfactory feature for such a position.

However, I shall perhaps try a fifth study, with a low dome and no towers; though I confess I like my present design, and have a belief that if it were ever built it would be thought a success. As of course nothing will ever be done, it is only a harmless academical pastime, which amuses me and hurts no one.

H. HEATHCOTE STATHAM [*F.*].

Books Received.

Estimating: being the Analysis of Builders' Prices, with full information of Estimating, containing over 1,000 Analyses, detailing prices, &c. By Thomas D. L. Piper. With 40 illustrations. Part I. 3*s.* 6*d.* net. [The Ubique Press, Limited, 1 Middle Street, Portsmouth.]

9 CONDUIT STREET, LONDON, W., 31*st August* 1912.

COMPETITIONS.

Rangoon Municipal Buildings Competition.

Messrs. Ogilby Gillanders and Co., agents for the Rangoon Municipality, of 67 Cornhill, E.C., write that the date in the Conditions in Clause 28 has been altered from 31st August to 28th September, and in Clause 14 from 1st January to 1st February 1913. The latest date for posting letters to reach Rangoon by the latter date will be by the Indian mail of 10th January 1913.

The Assessor is an Associate R.I.B.A. and Consulting Architect to the Government of Burma. The duties of the Assessor will be in accordance with Clause 2 of the R.I.B.A. Regulations for Architectural Competitions. The selected architect will have undivided responsibility for the carrying out of the work. The duties mentioned in Clauses 22, 24 and 25 of the Conditions of Competition have been modified, and the duties of the selected architect will be those specified in the R.I.B.A. Schedule of Professional Charges. Clause 4 of the Conditions has been modified and payment of the commission will be in accordance with the R.I.B.A. Schedule of Professional Charges. The plan numbered "6" in Clause 19 of the Conditions may be omitted by Competitors.

Huddersfield Town Planning Competition.

The Competitions Committee of the Royal Institute have considered the conditions of the above, and while they cannot advise the Council to bar the competition they consider the conditions in many respects unsatisfactory.

Competition for Constables' Houses, Ayr.

Members and Licentiates are informed that this competition has been vetoed by the Glasgow Institute of Architects on account of the unsatisfactory nature of the Conditions.

IAN MACALISTER, *Secretary R.I.B.A.*

CHRONICLE.

British School at Rome: Scholarship in Architecture.

Particulars are now available of the Scheme of Competitions for the Scholarship in Architecture

at the British School at Rome,* offered by the Commissioners for the Exhibition of 1851.

The Scholarship will be of the value of £200 per annum, and will be ordinarily tenable for three years. The Competitions will be conducted by the Faculty of Architecture of the British School at Rome.†

The Examinations will be graduated in three stages :—

(A) An Open Qualifying Examination.

(B) A First Competition, open to candidates selected in the Open Qualifying Examination, to the winners of certain Scholarships, and to candidates nominated by certain bodies.

(C) A Final Competition, open to not more than ten candidates selected from the candidates in the First Competition.

Candidates must be British subjects, and less than thirty years of age at the date of entry for the Final Competition, which will be held in September 1913.

Candidates who have gained a place in the list of eligible candidates for the First Competition, either as the result of the Open Qualifying Examination or in virtue of their having obtained certain Scholarships or of their having been nominated by certain bodies, or who have failed in the Final Competition, will be entitled to compete again in the First Competition until the age limit defined above has been reached.

(A) The Open Qualifying Examination.

For this examination all British subjects under thirty will be entitled to enter. The subject will be set by the Faculty of Architecture, and the design must be sent in on a double elephant sheet. From candidates entering for this Examination the Faculty will select those eligible to compete in the First Competition.

(B) The First Competition.

For the First Competition the following candidates will be entitled to enter :—

1. The candidates selected in the Open Qualifying Examination.

2. Winners of the R.A. Travelling Studentships and of the following R.I.B.A. Studentships :—

Soane Medallion.
Tite Prize.
Owen Jones Studentship.
Ashpitel Prize.
Grissell Medal.

3. Candidates nominated by the following, with a maximum of four from any given Institution :—

a. The Royal Academy.
b. The Royal College of Art.

And the following Institutions "recognised" by the Royal Institute of British Architects :—

c. Edinburgh College of Art.
d. Glasgow School of Architecture.
e. Liverpool University School of Architecture.
f. The Architectural Association (London).
g. London University School of Architecture.
h. Manchester School of Architecture.
i. Sheffield University Department of Architecture.

4. Candidates nominated by the Allied Societies of the Royal Institute of British Architects in the Colonies.

The subject will be set by the Faculty, who will also determine the number and character of drawings required.

Candidates will be allowed two months for the preparation of their designs, reckoned from the date of the issue of the subject with its conditions.

From the candidates who have competed in the First Competition the Faculty will select not more than ten candidates for the Final Competition.

C. The Final Competition.

The subject for this Competition will be set by the Faculty, and will be announced in the room on the opening of the first sitting of the competitors. The Competition will be held "en loge" in London. It will begin at 10 A.M. on a Monday morning and continue till 1 P.M. on the Saturday of the second week following.

Competitors will be required on the first day to make a sketch design which shall be covered with a sheet of tracing paper sealed down in the compartment by the Moderator at the end of the first day. In their finished designs the competitors must adhere generally to the idea of the sketch design.

The Faculty will select the successful candidate for the Commissioners' Election.

Further Particulars.

The subject for the Open Qualifying Examination will be announced in the Autumn. The last date on which designs for this Examination can be received will be 20th January 1913. The date of the First Competition will be 15th March to 15th May 1913. The date of the Final Competition will be 15th September to 4th October 1913. It is the intention of the Faculty of Architecture to arrange the announcement of subjects for the Open Qualifying Examination and for the First Competition so as to enable students in the Dominions to have the same time for the preparation of their designs as the students at home.

* Copies may be had on application to Mr. Evelyn Shaw, Hon. General Secretary, Office of the British School at Rome, 54 Victoria Street, S.W.

† Journal, 27th April 1912, p. 462. The members of the Faculty of Architecture are Messrs. Reginald Blomfield, A.R.A., *President R.I.B.A.*, W. R. Lethaby [*F.*], E. L. Lutyens [*F.*], Sir Robert S. Lorimer, A.R.S.A. [*F.*], Ernest Newton, A.R.A [*F.*], Professor C. H. Reilly [*A.*], John W. Simpson [*F.*], Leonard Stokes [*F.*], and Sir Aston Webb, C.B., C.V.O., R.A. [*F.*].

Official Architecture : Questions in Parliament.

In the House of Commons on the 25th July Mr. Goldsmith asked whether, in view of the fact

that the annual expenditure of the Office of Works is £2,500,000, he could state how much of this sum had been spent on new buildings during the past financial year and how much on repairs ?

Mr. WEDGWOOD BENN, for the First Commissioner of Works : The total amount spent by the Office of Works on new buildings, including the cost of certain sites during the year 1911–1912, was £822,476 ; on maintenance and repairs, £587,868.

Mr. GOLDSMITH further asked what was the amount of new work, excluding repairs, executed to the design of the Office of Works since 1st January 1907, and what was the amount of salaries paid in connection therewith ?

Mr. WEDGWOOD BENN : The expenditure upon new works executed to designs prepared in the Office of Works for the five years ending the 31st March 1912 has amounted to £4,066,945. The total payment for salaries, &c., for the same period is £464,493, but a large proportion of this is for services not connected with the construction of new buildings.

Mr. GOLDSMITH asked the President of the Board of Agriculture whether the design which had been adopted for Oxford Circus was to be continued for the remainder of Regent Street as far as the Quadrant ; whether any scheme had been laid down for the rest of the street ; and, if so, whether he could state the name of the architect selected ?

Mr. MONTAGU, replying for Mr. Runciman : A design has been approved for Oxford Circus and the adjoining frontages along Regent Street as far as the first cross street on each side. No one scheme has been laid down for the rest of the street. Between the termination of the Oxford Circus design and the Quadrant the street is divided into separate blocks by side streets, and for several of these blocks designs by various architects acting for occupying tenants have been settled and in part executed.

Mr. GOLDSMITH : Was Mr. Tanner's design for rebuilding Oxford Circus selected by an open competition ; and, if not, what system was adopted ?

Mr. MONTAGU : Mr. Tanner's design was not selected by an open competition, but from designs submitted by several architects acting for tenants occupying premises in the Circus.

On the 6th August, Mr. GOLDSMITH asked if he could be informed of the number of buildings erected by the Office of Works to the design of architects not connected with the Office of Works since the 1st January 1907 ?

Mr. WEDGWOOD BENN, replying for the First Commissioner of Works : No new buildings designed by outside architects have been commenced since January 1907, but several have been in course of erection which were commenced prior to that date—viz. (1) Victoria and Albert Museum ; (2) Admiralty Buildings, Block IV. ; (3) British Museum Extension ; (4) Public Offices, Whitehall.

Mr. GOLDSMITH : Is the hon. gentleman aware that the Office of Works have spent over £4,000,000 in the last five years on the erection of new buildings, and apparently the whole of that work has been done by the official architects of the Office of Works ; and will they see that in future outside architects are given a chance of competing with the official architects ?

Mr. WEDGWOOD BENN : I cannot say, without reference, whether the figures given by the hon. member are correct, but there is no reason why the Office of Works should change the course which they have adopted.

Mr. GOLDSMITH : Is the hon. gentleman aware that these are the figures which he gave me last week ?

South Kensington Museum.

In the Report for the year 1911 on the Victoria and Albert Museum, the Director and Secretary, Sir Cecil H. Smith [*H.A.*], states that the architectural collection of the Indian Section, which is now exhibited in the Entrance Hall and Rooms 1 and 2, has been considerably revised, and rearranged as far as possible under the three headings, Buddhist, Brahmanical or Hindu, and Muhammadan. The important plaster casts representing various styles of Indian architecture have been carefully tinted to reproduce the tone and surface of the originals. Thus the casts prepared from architectural details in the deserted Mogul palaces at Fathpur-Sikri have been coloured to resemble the characteristic red sandstone of that group of buildings ; those prepared from details illustrating the highly sculptured work in the Brahmanical temples at Bhuvaneshwar, Orissa, to resemble the original buff-coloured sandstone ; and those from architectural panels in the ruined Muhammadan city of Gaur, Bengal, to resemble the greyish-black hue of the so-called "blackstone" (carboniferous shale). A series of drawings, prints, and photographs, illustrating the principal styles of Indian architecture—Buddhist, Jain, Brahmanical-Dravidian, &c.—is also to be exhibited in this room.

Additions to the Phené Spiers Collection of Architectural Drawings include designs by Sir G. Gilbert Scott for the Roman Catholic Church of St. John, Norwich ; for St. Mark's, Milverton, Leamington ; for a Lych House, Ramsgate Cemetery ; for All Hallows' Church, Southwark, and for the portals of the north transept and for pulpit of Westminster Abbey ; measured drawings by Mr. A. E. Bullock of the Brewers' Hall, Addle Street, E.C., and the Nicholas Stone monuments at Charterhouse Chapel, &c. Also a collection of sketch designs for York House, &c., by Philip Wyatt ; drawing of frescoes of Easby Abbey Church and of details of other churches by Mr. Phené Spiers ; and a design by Mr. Ernest Claude Lee for St. Mary's Church, Whitechapel.

The State and Art Training.

At the annual meeting of the National Society of Art Masters, held at the South Kensington Museum on the 25th ult., Mr. Reginald Blomfield, A.R.A., President R.I.B.A., in an address on "State-Aided Art Training in England," said that the artist and craftsman were in a precarious position, and their work was not in demand owing to the accumulation of works of art, and the particular direction given to connoisseurship by wealthy modern collectors. The State had not only failed to deal with the problem, but had aggravated it by letting loose on the market large numbers of imperfectly trained artists, their imperfect training being due to the absence of clear principle or policy in regard to the object and limits of State-aided training in art. The result was a large supply of that for which there was no demand. To meet those conditions they should definitely accept the position that the object in view was to produce really competent artists and craftsmen, men who would rank among the productive assets of the country. This would clear away the confusion between general artistic education and specialised instruction, and limit training to the latter. It would also wipe out the amateur. Candidates for admission to the schools should have to give proof of exceptional capacity; the schools should be reduced in number and the smaller be made preliminary and subordinate to a few central schools, which should be developed both as regards equipment and *personnel*. The instructors should be selected for proved ability, and not for the successful negotiation of certain mechanical tests. They should also be allowed the opportunity of practising their arts, giving, for example, half their time to the school and half to their private work.

The Insurance Act: Architects' and Surveyors' Society.

The Architectural Association, in conjunction with the Royal Institute of British Architects and the Surveyors' Institution, have had under consideration how best the interests of their members and those in their employ who come within the category of insured persons under the National Insurance Act may be promoted. After consultation with insurance experts, they have come to the conclusion that the formation of a special "approved society" for architects' and surveyors' assistants and clerks would prove advantageous to those concerned, for two principal reasons, viz.:

(i) That their average health, as a class, is good.

(ii) That the proportion of persons passing out of the category of insured persons is higher than in non-technical professions and businesses; and that as a consequence the funds available for benefits in addition to those provided by the Act would be larger than in societies with a miscellaneous membership.

Subject to sufficient numbers being obtained, it has been decided to found such a society. As a membership of at least 5,000 is necessary in order to form a separate entity for insurance purposes, it is hoped that support may be relied upon in furthering an effort which should prove of benefit to those in the professions who come within the provisions of the Act, by asking clerks and others who are eligible and would like to join, to sign the form of application. There is nothing to prevent persons who may have already enrolled themselves in a non-professional society from transferring their membership, and, for the reasons stated herein, there would seem to be definite advantages to be gained by their so doing. All persons engaged in architects' and surveyors' offices and earning less than £160 per annum are eligible for membership.

The formation of the society is supported by the following members of the two professions:—Sir Aston Webb, C.B., C.V.O., R.A. [*F.*], Sir Ernest George, A.R.A. [*F.*], Sir Alexander Stenning [*F.*], F.S.I., W. Edgar Horne, M.P., F.S.I., Leslie R. Vigers, F.S.I., G. Corderoy, F.S.I.; and by Professor Reginald Blomfield, A.R.A., President R.I.B.A.; A. W. S. Cross, M.A. [*F.*], George Hubbard, F.S.A. [*F.*], Ernest Newton, A.R.A. [*F.*], and E. Guy Dawber [*F.*], Vice-Presidents R.I.B.A.; Hon. Edward Gerald Strutt, F.S.I., President of the Surveyors' Institution; John Farrer, F.S.I., W. Edward Woolley, F.S.I., H. Chatfeild Clarke, F.S.I. [*F.*], Edward Blakeway I'Anson, F.S.I. [*F.*], Vice-Presidents of the Surveyors' Institution; Gerald C. Horsley [*F.*], President of the Architectural Association; W. Curtis Green [*F.*] and Maurice E. Webb, Vice-Presidents of the Architectural Association.

Applications for enrolment must be made on the official form not later than 16th September next to the Hon. Secretary of the Architectural Association, 18 Tufton Street, Westminster, S.W.

Housing and Town Planning Lectures.

The Garden City Association is arranging to deliver a series of lantern lectures in various parts of England during the coming winter on Housing and Town Planning. The subjects will include:

Town Planning: (*a*) Historical; (*b*) Continental Examples; (*c*) The Act of 1909; (*d*) The Present Position of Town Planning.

The Garden City Movement: (*a*) Its Origin; (*b*) Progress in England; (*c*) Progress Abroad; (*d*) Garden Cities as a Solution of the Housing Problem; (*e*) Garden Cities. Garden Suburbs and Garden Villages.

The Housing Question: (*a*) The Problem of the Slum; (*b*) Housing Environment and its Effects; (*c*) Housing in Mining Districts—the worst-housed parts of the country.

Co-partnership in Housing: (*a*) Its Phenomenal Growth; (*b*) Its Applicability.

Any who would like to arrange a lecture in their own particular town or district are invited to communicate with the Secretary of the Association at 3 Gray's Inn Place, W.C.

Obituary.

EDMUND JOHN MILNER ALLEN, whose death occurred on the 10th June from pneumonia, was the seventh and only surviving son of the late John Milner Allen, painter. Born in Bayswater in September 1859, his early years were passed in Fulham. When about eighteen years of age, he was articled with Mr. William Warlow Gwyther. In 1878 he became a student of the Royal Academy of Arts, where he was a Silver Medallist. In 1882 he was elected an Associate of the Institute, and in the following year was awarded an extra Silver Medal in the Soane Medallion Competition. For some years previously he had been engaged in miscellaneous decorative and architectural work and furniture designing, but in 1884 he commenced practice seriously. Success came to him early; from 1884 to 1885, the late Arthur B. Gibson and he, working in conjunction, won five competitions in succession at Newcastle-upon-Tyne, as a result of which they erected the Baths &c. at Byker, Scotswood Road, and Elswick, Newcastle-upon-Tyne. Having started so well in the North, Mr. Allen was for some time uncertain whether he should not settle there; he decided, however, to return to London, where he became associated with Mr. John W. Simpson. From their concerted designs some of our most notable specimens of architecture have been erected. At Liverpool, the City Hospital, South; at Worcester, the Victoria Institute (the first public building of which the foundation stone was laid by King George, then Duke of York); at Bradford, the Cartwright Memorial Hall; and at Glasgow, the Fine Art Galleries. These last, though composed on classic lines, are relieved from any severity of style by the free Renaissance treatment of their detail, and, as they stand in the Kelvingrove Park looking towards the University, form one of the noblest piles in Great Britain. In addition to the above works, Messrs. Simpson and Allen were the joint authors of the successful designs in the first two competitions for the Manchester Royal Infirmary. Very considerable work, both public and private, was also executed to Mr. Allen's sole designs, including houses at Wimbledon, Oxford, Brighton, and elsewhere, commercial buildings and gymnasia, &c., and the new Council Schools at Richmond (Surrey). Mr. Allen was a man devoted to his art and to the best traditions of his profession. His early death will be a great loss to architecture.—R. E. ALLEN.

ERNEST THEODORE FELGATE [*Licentiate*, 1911] served his pupilage with the late William Peachy, of York, for a term of five years. On the completion of his articles he was engaged in the architect's department of the Lancashire and Yorkshire Railway for about two years, when, the department being handed over to the engineers' staff, he entered the architect's department of the North-Eastern Railway at York, and during his stay there (which lasted eight years) was engaged in the preparation of plans for the Newcastle station, &c. After a term in the York City Surveyor's office, and as surveyor first to the Houghton-le-Spring Rural District Council, and afterwards to that of Beverley, he was engaged at different times by well-known architects of the North as head assistant to assist in the preparation of school plans, &c. In 1899 he started practice for himself in York, where he carried on a successful business. He was architect for the Haxby Day Schools and Sunday School, also for alterations and additions to Flaxton School, and numerous country residences in Yorkshire, &c. He was consulting surveyor to the Flaxton and Bishopthorpe Rural District Councils up to the time of his death.

Miscellaneous.

Mr. REGINALD BLOMFIELD, A.R.A., President R.I.B.A., has a new work in the press with Messrs. Cassell on "Architectural Drawing and Draughtsmen," in which he traces the history of his subject through the ages, with illustrations.

Mr. ARCHIBALD C. DICKIE [*A.*] has been appointed to the Chair of Architecture at Manchester University—vacant through the resignation, owing to ill-health, of Professor S. H. Capper [*A.*].

Mr. FRANK LISHMAN [*A.*] has been appointed Consulting Architect to the Government of the United Provinces of Agra and Oudh, India.

Mr. WALTER KNIGHT SHIRLEY [*Licentiate* 1911] has succeeded to the titles of his cousin, the tenth Earl Ferrers and Viscount Tamworth, who died on the 26th ult. The new earl, the son of the late Rev. Walter Waddington Shirley, D.D., Canon of Christ Church and Regius Professor of Ecclesiastical History, Oxford, was born in 1864, was educated at Winchester and New College, Oxford, and served his articles with Mr. Basil Champneys. In 1894 he was awarded a Medal of Merit in the Institute Prize Competitions for an Essay on the Treatment of Sculpture in relation to Architecture.

"Architects from George IV. to George V.": Errata.

The following errors require correction in the list of architects and their works appended to Mr. Maurice B. Adams' Paper "Architects from George IV. to George V." [JOURNAL, 27th July]:

Page 653: The Baroness Burdett-Coutts Market and the Fountain in Victoria Park were the work of HENRY A. DARBISHIRE, not Alfred Darbyshire.

Page 649: Mr. George D. Stevenson [*A.*], *Grissell Medallist* 1876, writes: "There is an error in the notice of the late Sir Horace Jones where it states in reference to the Tower Bridge that the details were done by Brangwyn. Sir Horace Jones did not live to carry out the work. I carried out the whole of the architectural design and details as well as the ornamental ironwork of the approaches, upper footways, lamps, &c., for Sir John Wolfe Barry. Previous to this, I had worked on the various schemes for some years for Sir Horace Jones. Reference to the *Building News* (June 29, July 13, July 27, 1894) and other papers will show correspondence and illustrations confirming all this. Sir John Wolfe Barry in his book and lectures was good enough to mention my name as having done this work for him."

King's Mound, Oxford : for Balliol College. (T. G. Jackson, R.A., Architect.)

THE ARCHITECTURE OF OXFORD.—II.

By W. S. Purchon [*A.*].

[*Continued from p.* 676.]

THE manipulation of the Orders, or the employment of a "ghost" to manipulate them, was becoming a fashionable accomplishment in the first quarter of the eighteenth century. Dean Aldrich, of Christ Church, seems to have had considerable architectural knowledge, but he would doubtless have the wisdom to consult Wren and Hawksmoor. In 1705 he showed his knowledge of Palladian architecture by designing the three sides of Peckwater Quadrangle, wisely following Wren's example and avoiding the closed form. The lower story of this building is of masonry with strongly marked joints, the two upper stories being treated with an Ionic order of flat pilasters, except in the centre of each façade, where six three-quarter columns are used to support a pediment.

It is probable that in 1706 Aldrich designed the south front of Corpus College, but his best work is undoubtedly All Saints Church, built in 1708. The square tower standing well above the church is well treated with strongly marked quoins and is crowned by an entablature and balustrade, from within which rises a drum, whose upper part is surrounded by a colonnade of detached Corinthian columns. Above this again is an octagonal spire, urns masking the changes from square to circular and from circular to octagonal. The body of the church is treated with a large order of coupled Corinthian pilasters with an attic above, the portico being formed with detached columns supporting a pediment.

The library, erected between the years 1716 and 1761 on the south side of Peckwater Quadrangle, is the work of another amateur, Dr. Clarke, of All Souls, who was evidently impressed by the buildings of Vanbrugh and Hawksmoor, if indeed he did not get direct assistance from the latter. The façade is treated with colossal Corinthian columns rising through the two stories and supporting an entablature which runs unbroken over the seven

bays of the front. The original intention seems to have been to support the library on columns, leaving the lower part open, on the lines of Wren's library for Trinity College, Cambridge. The best features of the design are its simplicity and the strong angle treatment with coupled pilasters, and its defects are the squat proportions of the lower story, the lack of emphasis in the treatment of the entrance, and the way in which the whole building dwarfs the adjoining ones. The end elevations with their Venetian windows are rather crowded. The first floor is occupied by one large room with a gallery on one side supported on Ionic columns.

The buildings at the entrance to Worcester College consist of two wings, one the hall (completed 1784) and one the chapel (rather later), connected by a vaulted space over which the library was constructed. In the front to Worcester Street indications of the late date can be seen in the delicate detail. The interior of the chapel was richly decorated by Burges. The library, completed in 1746, may possibly have been designed by Clarke, but if so he abandoned the use of the great order and contented himself with using an order as a subsidiary feature in the central part of the upper floor. It is not a great building, but the pleasing effects of light and shade given by the arcade on the lower floor, the contrast between the central part and the side wings given by the use of the order and of the semicircular-headed windows in the former, the tying together of the parts by good stringcourses and a simple but effective cornice, and its general air of simplicity and lack of ostentation, are all good points. It loses much by the fact that the mass of the central part is practically the same as that of each wing. Passing through the arcade under the library, one sees on the right a somewhat dull range of buildings erected between 1753 and 1773, and on the opposite side the picturesque mediæval monastic houses, which were fortunately spared by that great blessing, for which we ought to be so profoundly thankful—lack of funds.

In 1735 a long block of Fellows' buildings was erected to the north of the earlier buildings at Magdalen, by another amateur, Mr. Holdsworth. Here again only scarcity of money saved the beautiful old buildings, which would have been removed quite cheerfully by the eighteenth-century architects. Whatever faults the present-day architect may have, he can at least appreciate the beauty in worthy buildings of different styles, and one can only hope that in the event of a further revival, whether Gothic or Greek, this blessed gift may not be taken from the architects who come under its influence. These new Fellows' buildings at Magdalen are not without merit. The monotony of the south front is relieved by the arcade and to some extent by the breaks at the centre and ends, but these breaks are inadequate, and the central feature should have been made more interesting. It would not have been a difficult task for a master to have made this a really fine façade. If at a casual glance the amateur character of the work is not obvious, it becomes so on a more careful inspection, for the central pediment is but a sham, and the north front, which is treated differently from the south front, got the designer into all sorts of trouble when he tried to connect them up at the ends.

Between the years 1737 and 1749 the Radcliffe Library was built by Gibbs, this architect superseding Hawksmoor here as at King's College, Cambridge. It is a circular building in which, resting on a strong basement story, a Corinthian order of coupled columns rises through two stories and supports a fine unbroken entablature with a balustrade having a pedestal and urn over each column. The spaces between the pairs of coupled columns are alternately large and small, the large ones containing the windows and the small ones being treated with niches. Above the entablature, from the parts over the niches rise curved buttresses to support the drum of the dome, which is constructed of timber with great ribs which continue the lines of the buttresses up to the crowning lantern. It is a fine exterior; it would have been a great one had Gibbs devised some means of connecting up his curved buttresses with the supporting masses below, and had he treated the latter more vigorously. The interior is not

equal to the exterior, for the arches supporting the drum are circular on plan, and have the defects unavoidable in such an arrangement; the pilasters of the drum are too heavy for the more delicate work below, and the plaster-work of the Italians employed here by Gibbs, as at the Senate House, Cambridge, and St. Martin's-in-the-Fields, is not worthy of the building.

[Photo. J. R. Wigfull [4.].

THE RADCLIFFE LIBRARY.

Underground extensions to hold a vast number of books have just been completed below the open space to the north of the Radcliffe Library.

James Wyatt, who was responsible for various attempts to improve Gothic buildings, some of which have already been noted, designed in 1778 the Doric gateway to Canterbury

Quadrangle, a small quadrangle, built 1775 to 1783, opening off Peckwater Quadrangle in Christ Church College. He also built in 1788 the library in the Garden Quadrangle at Oriel College, the east side of which was built in 1719 and the west side in 1730. This library is chiefly interesting as an example of the more refined detail which was then being introduced, its Ionic capitals being so delicately worked that only one volute has remained intact. The arches on the ground story come much too close to the string which supports the Ionic columns, and the angle treatment in the upper story is particularly feeble.

Between the years 1772 and 1775 the Radcliffe Observatory was built from the designs of Wyatt and Charles Pears. It is an interesting example in the Adams' manner, the vigour of the work of Wren and his followers being replaced by that delicacy and refinement which, owing to a study of Greek models, were becoming fashionable. Its most satisfactory features are the general scheme of the building, in which the uses to which it was to be put were wisely treated as the dominating factor, and the skilful introduction of terracotta plaques, the soft Bath-stone of which the building is constructed being unsuitable for carving.

The New Clarendon Press in Walton Street, a large block of buildings surrounding a quadrangle and with an entrance gateway reminiscent of Constantine's Arch at Rome, was built in 1830 from the designs of Daniel Robertson. Mr. Blore was called in afterwards, probably to give assistance in superintendence rather than in design.

Following this, the Church of St. Paul, opposite the New Clarendon Press, was built with a Greek Ionic portico in 1836.

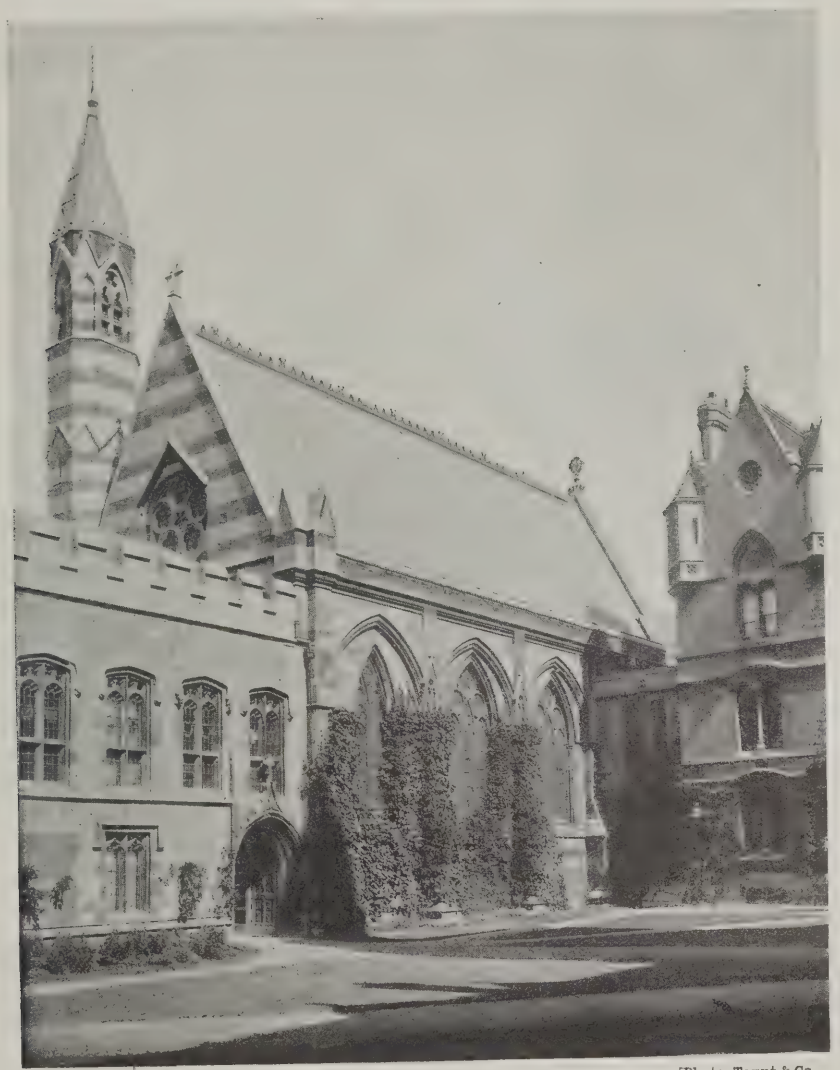
In 1841 a competition held for the Taylor and Randolph Institute was won by Cockerell, whose design consists of two tall wings, projecting boldly—perhaps too boldly—from a comparatively low gallery with a tetrastyle Ionic portico, the order being based on that at Bassæ, which Cockerell knew so well. The detail throughout is exquisitely beautiful, deserving a better fate than exile in this sunless land, and Cockerell has here shown how a building can be designed in the Greek spirit without making it either unsuitable for its purpose or a mere copy of a Greek design. Here such apparently incongruous elements as Greek detail, semicircular arches, prominent chimney stacks, and a great Italian cornice are welded together by the genius of an artist into an almost completely satisfying whole. One makes this limitation, for the mass of the link is hardly adequate for its purpose of connecting the two great wings, the detached columns supporting statues on the front to St. Giles are only satisfactory to the special pleader, and the climate of Oxford has not undergone the necessary modifications. At the date of the erection of this building the Gothic revival was in full swing, and the published opinions of its exponents on Cockerell's building were far more vigorous than most of their own designs.

At Pembroke College, the library, once the refectory, on the west side of the front quadrangle, is all that is left of the original buildings. The remainder of the front quad was built between 1624 and 1694, but it was considerably Gothicised in 1830. The chapel of Pembroke, a somewhat plain structure built in 1728 with the Ionic Order used externally, was fortunate enough to escape the Gothic Revivalists, but its interior was richly decorated in 1884 by Mr. C. E. Kempe. Mr. Hayward in 1848 designed the back quadrangle and hall in the manner of the Gothic Revival, which had been steadily increasing in favour.

Mr. Buckler, who worked on the restorations of the Church of St. Mary the Virgin, Jesus College, and Brasenose College, and who designed the County Police Station in the Norman style, designed in 1851 the hall of Magdalen College Schools, a pleasing example of Gothic revival work near Long Wall Street. The School House beyond the bridge was built in 1894 from the designs of Sir Arthur Blomfield, whose Church of St. Barnabas was opened in 1869.

The University Museum, designed by Messrs. Dean and Woodward, was opened in 1860. A competition had been held, and E. M. Barry's classic design and Woodward's Gothic one

were first selected, but the final choice—to Ruskin's delight—naturally fell on the latter. In the interior it may be noted that the designers, working on the mistaken assumption that the building, instead of being a setting for exhibits, should incorporate some of them in its structure, have made the many shafts out of samples of important British rocks. The capitals are carved with representations of natural objects, and the cast-iron columns which support



[Photo. Taunt & Co.

Balliol College Chapel.

the glass roof are embellished with more naturalistic ornament in wrought-iron, but the searcher after architectural beauty will doubtless cheerfully leave this building to the scientist.

To Street's restorations of St. Michael's Church and the chapel of Jesus College, reference has already been made. In 1860 the Church of SS. Philip and James in the Woodstock Road was built from his designs, the spire being added in 1866.

But little remains of the early buildings of Exeter College. There is still part of the Old Gate Tower of 1432, but in 1834 the Turl Street front was rebuilt. The hall of 1618 has been

restored more than once, Mr. Reginald Blomfield's recent work here including some new panelling and two new fireplaces and mantelpieces. Sir G. G. Scott designed the front to Broad Street in 1854; his Gothic library was built in 1855, and in 1856 the chapel built in 1623 was pulled down to make way for a somewhat lifeless and toned-down version of the Sainte Chapelle. In 1890 the beautiful tapestry designed by Burne-Jones and executed by Morris was placed in the interior.

In 1861 the library of University College was built from Scott's designs in the manner of the fourteenth century, and in 1872-6 his dreary new buildings for New College were built facing Holywell Street. The Martyrs' Memorial, commenced in 1841 and based on the Eleanor Cross at Waltham, is one of his earliest works. Attention has already been drawn to Scott's work in the nature of what used to be called "restoration" in the Cathedral, and in All Souls, Merton, New, and University Colleges.

Of Balliol, one of the oldest of the colleges, very little of the old work remains. The Old Dining Hall, now a reading-room, belonged to the early part of the fifteenth century, but this and the library unfortunately came into the hands of Wyatt near the end of the eighteenth century. There are still a fine oriel window, supported on three beautiful corbels, and an old archway, but the latter is not in its original position. The uninteresting Fisher buildings at the corner of Broad Street and Magdalen Street were built in 1769 and refaced in 1876, and the Broad Street front was built in 1869 from Mr. Waterhouse's designs, and in 1877 the same architect built the new Dining Hall. In 1856 the old chapel at Balliol was pulled down and replaced by a new one designed by Butterfield in his earlier and more restrained manner. We have seen how in the eighteenth century it was only lack of funds that in many cases saved beautiful Gothic work from destruction, and that the architects of the Gothic Revival often had as little respect for Renaissance work, and now we come to what one hopes is the last chapter in the history of vandalism—the proposal to pull down Butterfield's chapel and to replace it by an imitation of the one which was removed in 1856. Let us hope that if those in authority do not appreciate Butterfield's work, they will at least realise that those who destroyed works of art in the eighteenth and nineteenth centuries had the same excuse to offer, in addition to the one that the buildings which displeased them were often not in the best of repair.*

In 1870 Keble College, designed by the same architect, was opened, its chapel, planned as an ordinary church, being completed in 1876, about which date the hall and library were commenced. The restless appearance of the chapel, the result of Butterfield's inordinate love of colour, prevents one from appreciating its architectural qualities, but this defect is fortunately one which will doubtless be remedied by the kindly hand of time.

Messrs. Bodley and Garner's beautiful work at Christ Church, and Mr. Bodley's new roof to the Hall at Magdalen College, have already been mentioned. Between 1876 and 1879 these architects built the Master's Lodge at University College, and in 1880 St. Swithun's Quadrangle was commenced from their designs, the President's lodgings being built a few years later. Designed in perfect harmony with its beautiful surroundings, this group at Magdalen is one of the finest examples of modern work in Oxford. The austere but beautiful monastic church of St. John the Evangelist, Cowley, Oxford, by Mr. Bodley, was completed by the building of the tower in 1904.

In considering the work of Mr. T. G. Jackson in Oxford one is beginning a fresh chapter in the history of the buildings of that city, for his work is principally based on a study of the Early English Renaissance. In 1879 his Acland Nursing Home—a simple piece of design with sash windows and curved pediments—was opened, and about the same time his charm-

* It appears that the Master and Fellows of Balliol have decided not to rebuild Butterfield's chapel, *see The Times*, 9th Dec. 1911.

ing High School for Girls was being built in brick and rough-cast, with a fine cornice, a big simple roof, and sash windows separated by piers treated with pilasters. These were followed in 1881 by the High School for Boys, which is more characteristic of his style, and in 1882 his Examination Schools were opened. This is one of his most important buildings, and in

[Photo. E. A. Walsham.

BALLIOL COLLEGE, OXFORD, 1907. (Edward Warren, Architect.)

designing it he was strongly influenced by Kirby, though some of the detail in the interior suggests the influence of his Byzantine studies. Noteworthy features are the hall, with its gallery skilfully supported on great brackets and coffered arches, and the central feature on the west front of the quadrangle, with its three orders superimposed. The extension to the

east, made in 1888, is on Gothic lines. Between the years 1883-7 he was at work on the fine new buildings, including the President's House, at Trinity College. In 1887, and again quite recently, Mr. Jackson has done excellent work at Brasenose, the President's House, with its series of richly crowned oriels, being particularly pleasing. At Hertford College,

Hertford Chapel. (T. G. Jackson, R.A., Architect.)

where his work, to harmonise with its surroundings, is more staid, Mr. Jackson built in 1889 the entrance gateway and hall connecting the two unexciting wings of 1822. He also built the new block on the north side of New College Street, but the bridge which he designed to connect the new block to the old has not been carried out. The beautiful new chapel at

Hertford, opened in 1908, is one of his finest works. Mr. Jackson's house for the Master of Balliol in Mansfield Road is an excellent example of domestic architecture. It is of stone, with brick and stone in the sturdy chimney stacks, in one of which the change from stone to brick and stone is very pleasingly managed by means of a diaper treatment. Mr. Jackson has also designed new buildings for Somerville College, Corpus College (on the north side of Merton Street), and quite recently the New Radcliffe Library and the Electrical Science Building, both close to the museums.

In addition to his new buildings Mr. Jackson is responsible for much important restoration work at Oxford, including work at the Schools Tower, the Church of St. Mary the Virgin, All Saints' Church, the Hall of Lincoln College, the Chapel of Oriel, and the Chapel of Wadham. Of most of his work in Oxford, it can be said without exaggeration or fear of contradiction that it is at home amidst its beautiful surroundings.

Merton College: Part of New Buildings. (Basil Champneys, Architect.)

Mr. Basil Champneys is responsible for a considerable amount of very interesting work in Oxford. In 1874 the Church of St. Peter-le-Bailey was built in the manner of the fourteenth century from his designs to take the place of a church which had been built in 1740, and which was pulled down as part of a street improvement scheme. His Indian Institute, built in the style of the Early Renaissance on a fine site at the east end of Broad Street, was opened in 1884. In 1886 he designed the charming house for New College, and in 1898 the Robinson Tower connecting it to Scott's dreary pile. At University College the same architect was to some extent responsible for the domed mausoleum (built to receive Onslow Ford's Shelley memorial statue), which connects up Sir Charles Barry's western wing (1843) to the older part of the college. Mansfield College, opened to graduates in 1889 for the study of theology, is a good example of Mr. Champneys' Gothic work, the buildings including chapel, library, dining-hall, common-room, and principal's house. In 1904 he added a fine library to Somerville College. To Merton College in 1907 he added a warden's house on the north side of Merton Street, and a set of new buildings

of great beauty on the site of St. Alban's Hall. The skilful manner in which Mr. Champneys has balanced his fine oriels with the other features is particularly noteworthy.

Mr. Champneys' latest work in Oxford is the extension to Oriel College with an important front on the High Street opposite the Church of St. Mary the Virgin. For these buildings, recently opened, the college is indebted to the late Cecil Rhodes.

Manchester College was built in the years 1891-3 on a site to the north of New College from the designs of Messrs. Worthington and Son. The college offers a training in theology to graduates. The buildings include a chapel and library, the former containing some glass designed by Burne-Jones.

Lady Margaret Hall: Entrance Front. Extension intended on the left.
(Reginald Blomfield, A.R.A., Architect.)

The Municipal Buildings, designed by Mr. Henry T. Hare, were opened in 1897. The site was as awkward as the requirements were varied, and Mr. Hare dealt with a very difficult problem in a masterly manner. He has arranged the various groups of rooms, provided adequate approaches to them, and at the same time masked so skilfully the awkward angles which occur in the interior as a result of the awkward site, that the whole scheme, which includes Council Chamber, Sessions Court, Town Hall, Assembly Hall, and Public Library, seems simple. The building is treated in the manner most characteristic of Oxford, and is detailed throughout with the greatest care. Externally the main entrance from St. Aldate's Street with the Assembly Hall over forms a fine central feature, and this is flanked on the

north by the offices on the ground floor and the committee rooms over, and on the south by the library, these flanks being treated with fine oriels on the first floor surmounted by great gables reminiscent of Kirby Hall.

The Choir School House for New College, built in 1903 from the designs of Messrs. Nicholson and Corlette, is a charming example of domestic architecture.

Mr. Warren, who has done valuable restoration work at Worcester and extensions for St. John's, designed a block of quiet dignified buildings on St. Giles for Balliol in 1907, incorporating in them some old panelling, an eighteenth-century stair, and a fine chimney-piece removed from the old building. The same architect is also responsible for pleasing domestic work in Oxford, including houses in King Street for Merton College.

Mr. Reginald Blomfield, to whose restorations at All Souls and Exeter reference has been made, in 1896 built a wing for Lady Margaret Hall. The large central block, containing the dining hall, library, etc., has just been completed from his designs, and it is intended to extend this by means of a wing to balance the earlier one. This work, which is in red brick with stone dressings, is carried out in the style of the Later Renaissance. One is accustomed to associate dignity and scholarship with Mr. Blomfield's designs, and the accompanying illustration of his work at Lady Margaret Hall can be left to speak for itself.

Having thus briefly examined many buildings of various types and degrees of beauty, let us now imagine that the visitor's last half-day in Oxford has arrived. He will do well, I think, to revisit Magdalen, to see once more its beautiful tower, to walk down "the stream-like windings of that glorious street" to the Church of St. Mary the Virgin. Then by way of the Radcliffe Camera into Broad Street, and so to the interior of Trinity Chapel; and finally I would have him spend an hour in the gardens of St. John's leisurely examining the garden front of that college. So that it will be with thoughts of these beautiful buildings that he takes leave of "that sweet city with her dreaming spires."

Photo: Holliday & Son.

St. John's College: Garden Front.

SCIENCE AND PROPORTION.

By Paul Ogden [*F.*].

Read before the Manchester Society of Architects, 6th December 1911.

THE following, whilst not exactly a text, is somewhat of that nature, and, being written by the Greek teacher Epictetus, is interesting, inasmuch as it refers to and is evidence of the Greek attitude of mind. Although many of you will be reminded of your school-days, nevertheless the reiteration now may be of value for the present purpose, as may also quotations from the three great masters who preceded him by about three hundred years. The following extract from the *Teachings of Epictetus* recalls the modern discussions upon Art and Architecture, and shows us in what manner they may be regenerated:—

Behold, the beginning of philosophy is the observation of how men contradict each other, and the search whence cometh this contradiction, and the censure and mistrust of bare opinion. And it is an inquiry into that which seems, whether it rightly seems; and the discovery of a certain rule, even as we have found a balance for weights, and a plumb line for straight and crooked. This is the beginning of philosophy. Are all things right to all to whom they seem so? But how can contradictory things be right? "Nay, then, not all things, but those that seem to us right." And why to you more than the Syrians, or to the Egyptians? Why more than to me or to any other man. Not at all more. Seeming, then, doth not for every man answer to Being; for neither in weights nor measures doth the bare appearance content us, but for each case we have discovered some rule. And here, then, is there no rule above seeming? And how could it be that there were no evidence or discovery of things the most necessary for men? There is, then, a rule, And wherefore do we not seek it, and find it, and having found it, henceforth use it without transgression, and not so much as stretch forth a finger without it? For this it is, I think, that when it is discovered cureth of their madness those that mismeasure all things by seeming alone; so that henceforth, setting out from things known and investigated, we may use an organised body of natural conceptions in all our several dealings.

In support of the theory that the *Law of Numbers* is of the essence of that which architects call Proportion, and which by some is held as being beyond doubt, I propose to quote Epictetus, Plato, Aristotle, Pythagoras, Vitruvius, Descartes, Euler, Leibnitz, Schopenhauer, Hanslick, Spencer, Galileo, Hellenbach, Kepler, and Dalton.

Few architects there are who do not use the word Proportion. Some few have given us diagrams setting out buildings upon interaxial lines, but none have given reasons that the employment of such lines is of the essence of the matter. Diagrams we have of interaxial lines spaced a given unit apart for the plan, forming equal squares, and the same are used and have been used for elevations. We might go further than this, and use horizontal lines for the elevations, the spacing corresponding to the ratios of the musical scale. These will be found to give an harmonious, and consequently satisfactory, result.

Viollet-le-Duc speaks of the harmonic systems of proportion used by the Greeks, arguing "that they differ from those of the Middle Ages." He states that the system of harmony of the Greeks was derived from numbers, that of the Middle Ages from geometry. He suggests that these proportions should be known, and that without them we are unable to arrive at the essence of Greek architecture. In support of that theory he gives us diagrams of cathedrals of the Middle Ages set out upon his theory of triangles and geometrical figures. In addition to the method of triangles, he shows one or two cathedrals based upon squares, which method, as being different from his own, he accounts for by the fact that they are within the Roman influence. There is an interesting diagram of Amiens Cathedral based upon squares measuring 23 feet 6 inches along their sides. Viollet-le-Duc asserts that we have lost, and should try to find, that which is the essence of proportion.

Architecture would be the better if the scale were ignored or forgotten. If the area of the site of the building were divided into equal squares by means of interaxial lines, and the points of support placed upon the intersections of such lines, and carried up to points or levels of varying rhythmical planes, or of planes at the unit distance apart, and the screen walls filled in between the points of support to form the compartments, and the voids and the solids in such walls bore rhythmical proportions of one to the other and to the whole, we should have a building undoubtedly as pleasing, and it is submitted more pleasing, than buildings erected on the haphazard or unsystematic manner. If the centres of the supports are set upon the intersections of the lines, and the laws of equal halves obeyed, the intelligence will undoubtedly recognise and appreciate this right proportion. This skeleton scheme of interaxial lines which form cubes would be something like a well-tuned musical instrument, upon which you may play harmonious compositions should your knowledge of consonance, which to the architect means proportion, be equal to the task. While such compositions will be harmonious, they may or may not reach to the level of the virtuoso, or to the genius of a great architect, but the basis of such methods of composition can be in no way a hindrance to the latter, and should be an aid, whilst they prevent the average mind from creating dissonance.

It should be clearly kept in mind that the eye and

ear are media to the intelligence, and have no function apart from that. Some scientists assert, with great show of truth, that they are governed and affected by the same law, that is to say, by vibration. If rhythm and proportion are common to all objects worthy the name of excellent, and if we could infuse rhythm and proportion into such objects, we should have excellent objects, which would be the Greek view of what we call "the beautiful." No one, so far as I am aware, has been able to explain the inner meaning of this word "beautiful," so commonly used. It seems to be nothing but what could be called "proved excellence." An ancient Greek would not understand our use of the word "beautiful." "That which is excellent"; "That which is for the chief good"; "Art conjoined with true reason, and there is none which is not such"—these are the Greek views.

Science can aid us to this end. Art would be better if it embraced science. Science is mere deep thinking and sound reasoning. Pupils in art schools have the right to know *why* in addition to *how*. Clients, too, have the same right to know why. Men unlearned in science, or who have not a knowledge of it, expect acquiescence in their mere assertions. Such men have held positions as leading tutors in art, but only during periods in which science and art were divorced. With regard to the marriage of science with architecture, Cambridge University adopts the view that architecture may be rightly described as both an art and a science, and that an adequate knowledge of its history and its relation to art in general is important to anyone who wishes to practise it. In drawing up their regulations, the first part deals with the mathematical and scientific principles upon which the practice of architecture is based.

The more Greek art and its development is studied, the more it is found to be based upon scientific reasoning; that is to say, so far as our knowledge goes through reading broadly, but not, unfortunately, from any actual knowledge we possess with regard to their practice for the generating of their systems of building. Proof of this will be found in Plato's *Republic*, in Aristotle's *Ethics*, and in most, if not all, of the works of the ancient philosophers and teachers, all of whom appear to place rhythm and the law of numbers before all else. Even Cennino Cennini in the fourteenth century puts science before art, for he says, "now the most worthy is science, after which comes an art derived from science and dependent upon the operations of the hand, and this is called painting." Combarieu's work on the *Laws of Music*, which I shall quote at length, is the most recent contribution to this rhythm of life. He, too, takes the scientific side.

Coming to modern times we have some very clever evidence of research with the object of ascertaining, first hand, views of art outside the pale of civilisation, it being impossible except through books, which only give a bald history of the art of past generations, to gather what was really the view of art at various periods.

Whether we are right in judging by appearances alone is to be doubted. It has been thought that some parallel might be found in such research, by which the known history of appearances, which have been taken for art in the sense in which we understand that term, has, upon investigation, been found foreign to it. American professors have thought that the lack of this direct evidence might be partially supplied by research amongst the savages, whose works have been taken as early indications of art. These researches show that what is taken for art or pattern is nothing of the kind. It is the evolution of forms of identification marks. When they copy designs from foreign pottery, they do so in the belief that the copied ornament will produce the same virtues in their pottery that they believe inherent in the pottery from which they copy the design. The arrow markings are a species of heraldry and identification marks, showing the tribe and pedigree of the owner, who is responsible for the misuse of it, and is entitled to any honour of right use. The women are tattooed, not to enhance their beauty, but in order to preserve their identity. All these markings are understood by the tribes; in fact, they are more or less a history of the people, and interest them as such, and in no way are they understood as artistic productions. If they set them out in something like rhythmic sequence, it is only from the fact that rhythm is common to their nature as it is to ours. The patternlike markings of the hair-combs of the women are charms against disease.

The only difference between civilised nations and savages is that the pattern and designs of the former have no reason for their existence other than æsthetic, whilst the latter have true reason, so far as true reasoning in the savage may go, from their view of life. The æsthetic reason in their case does not exist. It amounts to this: the savage in all probability is like the Greek, artistic from our point of view, but not from his; he possesses no respect for anything which is not useful, but from rhythmic pattern-making in the one case, and from scientific reasoning in the other, is looked upon as possessing art for art's sake, a subject of which he knows nothing and cares less. The savage, no doubt, has rhythm inherent in him, as we have; he beats sticks and drums, and dances to time. His time, it is said, is more accurate than ours. These savages, some of them, have a moral code which would if practised by civilised nations tend to righteousness. The men and women are not only denied the right to marry their cousins, but are not allowed to marry in the same tribe.

From such, and similar research, may we not learn not to be sure of appearances? The things which we take for artistic productions may be foreign to anything of the kind, and in fact may be independent of it. Conclusions too hastily formed will do more harm than good. The perpetual reiteration

that such and such is beautiful really has no meaning. What we assert about the Greeks being inspired may, upon investigation, be found to be nothing but the result of a profound study of the reasons of things, the searching for rules and principles, and the acceptance of, and rigid adherence to, these rules. If you will read the *Teachings of Epictetus*, the works of Plato, Aristotle, Socrates, and the others, you can come to no other conclusion.

Aristotle in his *Ethics*, speaking of Art, says :—

So Art, as has been stated, is "a certain state of mind, apt to Make, conjoined with true reason;" its contrary is the same state with false Reason, and both are employed upon contingent or variable matter.

Plato in his *Republic*, after discussing the rhythm of dancing, poetry, and music, and the right kind of these to be used for the chief good, says :—

But painting too is somewhat full of these things; and every other workmanship of the kind; and weaving is full of these, and carving, and architecture, and all workmanship of every kind of vessels: as is moreover the nature of bodies, and of all vegetables: for in all these there is grace and awkwardness; and the want of grace, discord, and dissonance, are the sisters of a bad style and depraved manners; and their opposites are the sisters and imitations of sober and worthy manners. 'Tis entirely so, replied he. Are we then to give injunctions to the poets alone, and oblige them to work into their poems the image of the worthy manners, or not to compose at all with us? or are we to enjoin all other workmen likewise; and forbid this ill, undisciplined, illiberal, ungraceful manner, and allow them to exhibit it neither in the representation of animals, in buildings, nor in any other workmanship, and he who is not able to do this be not suffered to work with us? lest our guardians, being educated in the midst of ill representations, as in an ill pasture, by every day plucking and eating much of different things, by little and little, contract, imperceptibly, a great mass of evil in their souls. But we must seek for such workmen as are able, by the help of a good natural genius, to investigate the nature of the beautiful and the graceful, that our youth, dwelling as it were in a healthful place, may be profited on all sides; whence, from the beautiful works, something will be conveyed to the sight and hearing, as by a breeze bringing health from salutary lands, imperceptibly leading them on directly from childhood, to the resemblance, friendship, and harmony with right reason. They should thus, said he, be educated. On these accounts, therefore, Glauco, said I, is not education in music of the greatest importance, because rhythm and harmony enter in the strongest manner into the inward part of the soul, and most powerfully affect it, introducing at the same time uprightness, and making everyone upright if he is properly educated, and the reverse if he is not? And, moreover, because the man who has here been educated as he ought perceives in the quickest manner whatever workmanship is defective, and whatever execution is bad, or whatever productions are of that kind; and being rightly disgusted, he will praise what is beautiful, rejoicing in it; and receiving it into his soul, be nourished by it, and become a worthy and good man: but whatever is base, he will rightly despise, and hate, whilst yet he is young, and before he is able to be a partaker of reason; and when reason comes, such an one as has been thus educated will embrace it, recognising it perfectly well, from its intimate familiarity with him.

Again, pursuing the same train of thought, we read in Plato's *Republic* :—

And as for the man who is not able to give a reason to himself, and to another, so far as he is not able, so far will you not say he wants intelligence of the thing?

That in a most especial manner they attain to that part of education, by which they may become able to question and answer in the most scientific manner.

And is not this one prudent caution? that they taste not reasonings, whilst they are young; for you have not forgot, I suppose, that the youth, when they first taste of reasonings, abuse them in the way of amusement, and they employ them always for the purpose of contradiction. And imitating those who are refuters, they themselves refute others, delighting like whelps in dragging and tearing to pieces, in their reasonings, those always who are near them.

By what ought we to judge of whatever is to be rightly judged? Is it not by experience, by prudence, and by reason? Or has anyone a better criterion than these? The same magnitude perceived by sight, does not appear the same when near, and at a distance. And the same things appear crooked and straight, when we look at them in water, and out of water; and concave and convex, through the error of the sight as to colours.

Jules Combarieu, Professor of the History of Music, Collège de France, in his scholarly work *Music : its Laws and Evolution*, says :—

Can the principles brought to light by the two sciences of acoustics and physiology be explained—as Pythagoras, Descartes, and Euler would have it—by the more or less simple relation of numbers? Must we hold with Leibnitz "that music is an unconscious act of calculation"? Taking as our basis the first proposition, that music is the art of thinking in sounds, we shall reserve to ourselves the right of adding this, which is founded on observation: musical thought is the manifestation of a general and deep instinct, more or less hidden, but everywhere recognisable in humanity.

To the scholar who attempts, with the help of mathematics, to formulate the laws of multiple resonance, or to describe the mechanism of the ear in order to deduce therefrom the principles of grammar, we might say: "With what are you meddling, you musician of the laboratory, when you dare to point out the path and to lecture true musicians? Your labours have, no doubt, the interest which attaches to the observation and explanation of well-ascertained facts, but among all your experiments there is not one which has for its object a musical phenomenon. You study a note given by such and such an elastic body, and you are able to analyse it; you tell us what happens when two sounds produced at the same time have or have not common harmonies; you measure and you explain by numerical ratios an interval of an octave, of a fifth, of a fourth, etc., etc.; but all this is not music, any more than the letters of the alphabet are literature, or a few words made up of those letters are poetry. We can do without you. The siren of a Cagniart de la Tour has nothing in common with the sirens of antiquity!"

To take up this attitude, we might first rely on the almost unanimous evidence of those musicians who hold the interference of "men of science" to be useless or

annoying, and are much against listening to them at all. But as their opinion may be considered biassed, we might also claim support for the students of acoustics by taking advantage of their own disagreements. Helmholtz, who in 1863 flattered himself that he had given a scientific foundation to the A B C of musical composition, has been completely refuted by von Ottingen ; and many people consider that Professor Stumpf, of the University of Berlin, gave the decisive blow to his theory. A French philosopher, M. Guillemin, Professor at the Algiers School of Medicine, thus sums up the matter : " Good cooking was known long before chemistry made its appearance ; and even chemistry, since it has grown up, has not helped much to perfect cooking ; in fact, some people assert that it has destroyed the art. It may be the same with music." Thus the existence of harmonics is denied by M. Guillemin.

Nevertheless, this will not be our attitude. It is an easy matter to seek out oppositions, to draw impassable lines of demarcation between the domain of artistic activity and that of objective nature ; but what is really interesting is to search out the hidden harmony of things which appear as the most opposed to each other, or to see music in thought, thought in mankind, mankind in society, society in universal nature, all with incessant and minute interpenetration, crossings of lines, series of facts forming the transformations of force, and in sum that magnificent and stupendous harmonic whole called Life. It appears certain that, before they are organised within us, and take, under the influence of imagination, the shape of a melodious synthesis, sounds receive outside ourselves a primary organisation which prepares and conditions the work of the artist. These laws are made visibly manifest by experiments on a vibrating string or a small metal plate covered with fine sand. When a bow is drawn along the edge there appear in the sand nodal lines and curious geometrical figures. Nature is not a musician, yet she composes : she has a plan and a method ; and she obeys inflexible laws. A Mozart or a Beethoven are completely ignorant of them, and yet they conform with them unknowingly. This we shall prove by the analysis of certain musical texts. By the production of facts, and not of personal theories, we shall endeavour to prove that the musical composer, standing at the point where two groups of influences meet, obeys instinctively laws which at one and the same time may be referred both to social life and to physics.

If this end is attained our task will, so far, be finished. We shall have brought back to unity all the branches of our subject, dominated by a single principle. Instead of a mere juxtaposition of facts, we shall have an intrinsic and essential co-ordination of the sciences enumerated at the beginning of this introduction ; to wit, acoustics, mathematics, psychology, æsthetics, history, and sociology.

We can very well suppose a concatenation of sounds —such as every pianist is accustomed to improvise mechanically—in which the tonic and dominant chords are associated in conformity with the rules of musical theory, and which have yet no signification ; that would form, to borrow an expression from Leibnitz, " regular sequences," and nothing more. There exists, consequently, an essential difference between the formula which is simply correct and one which says something.

In the mind of Hanslick there is an ornamental art which may help us to understand how it is possible for music to create forms which, while of great value, contain no exact sentiment: it is the art of the arabesque. Let us imagine arabesques which, instead of being inert and without life, like those of the delineator, should form themselves before our eyes, the work of a mind endeavouring to depict, by the movement of lines, an endless phantasy. This would be an exact image of music.

In the Memorial Rites of the Chinese we read that music is intimately connected with the essential relations of beings. Thus, to know sounds, but not airs, is peculiar to birds and brute beasts ; to know airs, but not music, is peculiar to the common herd ; to the wise alone it is reserved to understand music. That is why sounds are studied to know airs, airs in order to know music, and music to know how to rule.

The principle and aim of all these rules is the pleasure of the ear. Whose ear ? That of the composer ? Certainly not, since he is not free, and, if he were, there would be, on the same point of doctrine, as many rules as there are musicians.

It is evidently a question here of the ordinary ear, the ear of everyone, the structure of which regulates the average impressions whence are derived the general rules forced upon the individual. Hence the composer finds himself in a situation analogous to that of the writer, who is bound down by a language which he did not create, but is obliged to respect under the penalty of being unintelligible. No doubt he can modify it, but only to a partial extent, and never abruptly through an act of pure individual phantasy. In music, as in literature, there is no organic change excepting where an innovation has obtained the approval and sanction of the community.

The idea of " alteration," which plays so large a part in musical grammar, is very conventional, since, in reality, there are no " altered " sounds, but merely periodical vibrations, differing one from the other by their number per second. It is impossible to find in this any *raison d'être* other than in the instinctive demands of the ordinary ear, which, receiving the impression of an interval, at times remembers or expects an interval smaller or greater by a semitone.

There is therefore, from a tonic to its octave, hundreds, and even thousands, of possible sounds, regularly utilisable. Yet we only acknowledge seven, which with the subdivision of certain degrees gives us in all twelve sounds. There are two explanations of this fact.

The first is that the ordinary ear is incapable of discerning too small intervals. We hear talk of very practised musicians who easily distinguish and reproduce by their voice fourths and sixths of a tone, and even more. We have only to observe a great violinist tuning his instrument or rectifying it in the course of a piece, to note that his ear is sensitive to sounds of extreme delicacy. But these are individual cases, and it is exactly for that reason they have not given birth to the rational and logical system which they might have produced. The system which has triumphed is certainly very defective in the eyes of a scholar, and we should condemn it did not so many masterpieces blind us to its constitutional viciousness ; its triumph is due to what pure theory calls routine, and what the sociologist might call the tyrannic influence of collectivity ; it is due to the state of the ordinary ear, which is not that of the virtuoso, but of people with limited powers, incapable of receiving very minute impressions and imposing their way of feeling upon the artists who, all said and done, work for them. The second explanation is that the organisation of the scale has no other

principle and no other aim than the following :—to form, with a sound arbitrarily selected (tonic) and some of the sounds included in its octave, such relations as may produce those consonances which we have already mentioned, and which the ordinary musical intelligence considers as the easiest to grasp because they are the most agreeable. This principle once applied to the space comprised between two limits like 435 and 870 vibrations, it was naturally extended to each division of the whole field of sounds available for the art, and thus grew up our musical system, which in great measure is only justifiable by reasons of a social order.

We shall fortify this point of view, which reduces the scale to the consonances, if we add that, in reality, there only exist in music intervals consonant or non-consonant, and that the scale is a theoretical fiction.

The scale has no more existence than has the " root " in the words of verbal language. It nowhere appears in the most ancient creations of a popular genius. It is a system deduced from the analysis of a work ; and it is not a fact of observation which can be isolated in the examination of a given melody.

Historically speaking, the scale is primarily what we call to-day a product of the laboratory or of the study, the creation of a Pythagoras or of a Ptolemy ; according to these scholars it remains a bookish and pedagogic thing, and a handy means of exposition for purposes of tuition. Mozart in the scene with the Commander in *Don Juan*, Beethoven at the commencement of his first Piano Concerto, wrote no doubt for the instruments melodious sequences which may be called " scales " ; but such works belong to a period when the theories of the schools made their influence on the genius of the masters to be felt.

Primitively one sings, and nothing more ; now, there are no scales in the chant in unison or in part-singing. At the present day the pupil who is " practising his scales " on the ivory notes or on strings, is devoting himself to an exercise useful for giving agility to his fingers, but he is without the pale of real music.

The most diverse origins have been assigned to the bar, which we have just defined as a succession of accented and unaccented beats. Plato sees in it a reminiscence of the Absolute, the act of an artist obeying, like God when creating the world, the law of numbers. Spencer considers it as one of the " First Principles " which underlie the constitution of things, and beyond which we cannot go back ; others have seen in it an imitation of the movements of a pendulum, of the beat of the pulse, of the normal stride, etc. . . .

Time is not a fact special to music ; it may be considered (though this is not the only legitimate view) as a law of work pursued in common, forced upon man by the necessities of practical life.

We must not content ourselves with words, but must always keep before our minds the real facts to which the terms employed relate. Nothing is easier than to invent new " musical forms," but to think that this act of invention is necessarily a sign of genius is going rather too far. The more ignorant he is, the more the forms he uses will be "novel." Anyone who, in an opera, placed the orchestra on the stage in costume, and the singers in the orchestra in evening dress, would evidently produce a novelty.

Let us also remark that to the psychologist a novelty is the more " personal," the worse, the more incorrect, and the more inartistic it is. Nothing can be more original than the scrawls of quite young children. Contemporary musicians who have created " new forms " are legion ; but do they all possess genius ? They are in a situation similar to that of the gymnast or dancer who takes the most abnormal positions without, however, emancipating himself from the laws of gravity. We recognise, therefore, that when Beethoven wrote a symphony he arranged all the parts of it rhythmically, both because a certain order was inherent to the nature of his thought, and because this thought itself was unconsciously subject to the influence of the law which regulates periodic vibrations.

In the diagram of vibrations the phenomena of light occupy, like the musical sounds, seven octaves, if we include those which, situated in the regions of the infra-red and ultra-violet, are not decomposable by the eye ; but visible light, decomposable by the colours of the prism, comprises but one octave, placed between the 48th and the 49th (of the series of 55 octaves of vibrations, which represent the phenomena known to us), viz. red, orange, yellow, green, blue, indigo, violet.

It is possible to construct chords of light on the same basis as musical chords.

Taking red at the limit of the spectrum, yellow at the (approximate) limit of the orange, and green at that of the blue, we obtain the ratios 8 : 10 : 12, which are those of the three notes of the major perfect chord.

Taking at their extreme limit the three colours which terminate the series of colours easily discernible by the eye—orange, green, violet—we get the ratios 10 : 12 : 16, representing the chord of sixth. By taking the terms of comparison in the middle region of the spectrum, we should still more easily find a counterpart to the chord of sixth and fourth.

Are the two senses of hearing and of sight formed by the same evolution and by a similar process ? This is what the facts of history would seem to affirm.

Thus, after having observed the properties common to electricity and light, to light and radiant heat, to heat and to sound (*exceptis excipiendis*), it is difficult not to acknowledge a certain unity in things, with special laws for very different modalities.

This unity the mathematical physicist continually finds inscribed of itself in the formulas he uses, and in which it seems as if the phenomena he puts into words mutually exchange their language. When he meets with the same equation in the theory of attraction, in that of the movements of liquids, in that of the electric potential, in that of magnetism, and in that of the propagation of heat, etc. . . . it is difficult, unless one is blind, not to see that the most opposite phenomena, having no apparent relationship, are yet connected by a secret internal analogy, that of the principle which governs them.

Music has its place in this harmony. It is not an exception, a miracle ; it forms part of a concert in which one can define its field. Its originality consists in belonging, at the same time, to two different worlds, and in subjecting to the conditions of objective life, to the laws of acoustics and of numbers, that flow of force which proceeds from the depths of feeling.

We can, therefore, extend to all phenomena the observations made above with regard to sounds and colours. As a rule, physicists are not fond of generalising ; they study, especially, the restricted systems that observation can reach, and declare that they know nothing of the Universe taken as a whole. They willingly leave to philosophers the work of constructing theories which go beyond the range of experiment. Yet one idea disengages itself from their labours. If everything is vibration, everything is energy. Energy is not

merely a force superposed on matter and which, distinct from it, animates it by virtue of a fundamental law ; it is identical with the things of reality and would suffice to explain everything.

Mathematics has no right to supreme power, but it has great claims to the gratitude of musicians.

1st. It serves—and it is an infinitely valuable service—to convey in plain language that which has been created by the musical instinct.

2nd. By placing before our eyes, by means of perfectly clear symbolical substitutes, musical facts, to the direct observation of which we should sacrifice an enormous amount of time, the mathematician shows us at one glance the corrections of which these musical facts are susceptible.

Thus arithmetic, it will be seen, after having been *ancilla cantus*, becomes *magistra cantus*, in the sense that it succeeds by degrees in disengaging from the facts the principle which governs them. In music it is not always, as in physics, the sole language used ; the composer might even be unacquainted with it : feeling, imagination, and pure thought might fully suffice him. If, however, we do not rely on instinct alone and demand a doctrine, arithmetic presents itself first, since the musical construction is formed of measurable quantities. It is immensely convenient—eliminating all the complex peculiarities of things and only retaining their form, and it places before the eyes of the theorist symbols which save him loss of time, and on which he can work as on the realities themselves.

It has been objected that, on the one hand, numbers and numerical ratios reject all approximate calculations; that, on the other hand, in practical music everything is but approximation, perfect and absolute exactness never having been obtained ; and that, consequently, all connection between the language of figures and that of sounds is vain. This objection would have the sole effect of demonstrating the utility of mathematics: they furnish means, more certain than the ear, of appreciating the errors themselves ; and the system they allow us to set up, if never strictly followed by the virtuosi, is a necessary ideal which they should seek to attain as nearly as possible.

3rd. By causing reality to speak a language in very general use, mathematics enables us to perceive curious analogies between music and phenomena very far removed from it.

It was said by Galileo that the great book of Nature " is written in the language of mathematics." And, certainly, while bearing in mind that writing is not thought, we may say the same of a musical work, which can be entirely expressed by numbers and their ratios. Now, one of the great advantages of the expression of fundamental intervals by numerical ratios is that it allows us to make very easy comparisons between separate phenomena, and suggests to us analogies which without them might have remained unnoticed.

In a curious work, *The Magic of Numbers*, Hellen bach asserted that " the universe is constructed so as to realise as much as possible the law of simple and rational numbers."

This last affirmation will, perhaps, seem on a par with the idea of Kepler, that, when creating the world and regulating the order of the heavens, God had in His mind the five regular polyhedrons of geometry ! But, without having such soaring dogmatic ambitions, we only need to read and compare in order to perceive, on certain points, an identity between the laws of music and those of chemistry. The comparison of these two orders of phenomena was already patent to the Greeks, who called by the name of Mixture and Combination—without distinguishing between the two—every emission of simultaneous sounds in simple ratios, and compared consonance to the " mixture of wine and honey." Let us recall some of the laws discovered at the beginning of the nineteenth century :

" When two or several bodies are united in several proportions, the weights of one of these bodies which unites it to an equal weight of the other are in direct proportion to each other." (*Law of Multiple Proportions, or Dalton's Law*, 1808.) For instance, oxygen forms with nitrogen six different compounds. In these the weights of oxygen, combined with a like weight of nitrogen, equal to 7, are respectively equal to 4, 8, 12, 16, 20, 24, or between themselves resemble our harmonics 1, 2, 3, 4, 5, 6.

" The weights according to which the different bodies are united to the same weight of the same substance represent the ratios according to which these weights unite among themselves, or are the simple multiples of these ratios." (*Law of Proportional Numbers*, ascribed to Berzelius, 1910.)

" When two gases combine, the volumes of the component gases are in direct proportion to each other ; (2) the volume of the combination, measured in the gaseous state, in the same conditions of temperature and pressure, is in direct proportion to the sum of the volumes of the components." (*Laws of the Combination of the Volume of Gas*, ascribed to Gay-Lussac, 1810.)

Thus the volumes of hydrogen and of oxygen which combine to form water are in the simple ratio 2 to 1. This is the ratio which expresses the octave in music.

Mr. Alfred C. Haddon, in his book on *Evolution in Art*, says :—

> There are two ways in which art may be studied, the æsthetic and the scientific. The former deals with all manifestations of art from a purely subjective point of view, and classifies objects according to certain so-called " canons of art." These may be the generally recognised rules of the country or race to which the critic belongs, and may even have the sanction of antiquity, or they may be due to the idiosyncrasy of the would-be mentor. In criticising the art of another country it must be remembered that racial tendencies may give such a bias as to render it very difficult to treat foreign art sympathetically. Western Europe and Japan are cases in point. Dogmatism in æsthetics is absurd, for, after all, the æsthetic sense is largely based upon personal likes and dislikes, and it is difficult to see what sure ground there can be which would be common to the majority of people. The æsthetic study of art may very well be left to professional art critics.

We will now turn to a more promising field of inquiry, and see what can be gained from a scientific treatment of art. This naturally falls into two categories, the physical and the biological,

I am not aware that much has been done towards establishing a physical basis for art. The pleasurable sensations which line, form, and colour may give rise to are doubtless analogous to those caused by musical sounds, but with this difference, that the latter are caused by the orderly sequence of particular vibrations, whereas the vibrations of the former are synchronous. It is possible that not only must the character of these vibrations be taken into account, but that the structure of the human eye and personal equation must be allowed for in analysis of the pleasurable sensations caused by any work of art. These remarks necessarily refer only to the forms of things; their meaning and the sensations thereby evoked belong to the domain of psychology.

I submit that it is high time that some science or reasoning should be infused into architecture, and, indeed, into all that we call art. The texts of the writers on architecture, it is submitted, do not help us very much, as the following quotations may tend to show:

The history of Architecture is the history of the world.—A. W. Pugin.

The influence of the causes which act most powerfully on the genius of the arts, after the climate, are the manners, religion, and the changes to which a nation is subject in its political state during the course of ages.—Seroux d'Agincourt.

Unless art is the expression of the system it should illustrate, it loses at once its greatest claim on admiration and fails to awaken any feelings of sympathy in the heart of the spectator.—A. W. Pugin.

Architecture is the art which so disposes and adorns the edifices raised by man, for whatsoever uses, that the sight of them contributes to his mental health, power, and pleasure.

Architecture concerns itself only with those characters of an edifice which are above and beyond its common uses.—John Ruskin.

In what are generally understood as styles in the history of art, such as the Grecian, the Roman, the Gothic, the Renaissance, &c., may be recognised deeply interesting accumulations of experience concerning the nature of man's intuitive affections for certain concatenations of form.

Styles are usually complete in themselves; and, although not of uniform excellence, are still generally concordant amongst all the various members that compose them.—M. D. Wyatt.

Architecture depends on fitness, arrangement, and on proportion, uniformity, consistency, and economy. The perfection of all works depends on their fitness to answer the need proposed, and on principles resulting from a consideration of Nature herself; and the ancients approved only those which by strict analogy were borne out by the appearance of utility.—Vitruvius.

The essence of the fine arts begins where utility in its narrower acceptation ends. The abstract character of ornament is in that sense to be useless. That this principle exists in Nature we immediately feel, in calling to mind the merely beautiful appearances of the visible world, and particularly the colours of flowers. In every case in Nature where fitness or utility can be traced, the characteristic quality or relative beauty is found to be identified by that of fitness; but where no utility is found to exist, save that of conveying rational delight, or of exalting the mind by ideas of perfection, we recognise a more essential or absolute principle of beauty.—Sir Charles L. Eastlake.

Infinite variety and unerring fitness govern all forms in Nature.—M. D. Wyatt.

The useful is a vehicle for the beautiful.

There should be no features about a building which are not necessary for convenience, construction, or propriety.

All ornament should consist of enrichment of the essential construction of the building.

Pointed architecture does not conceal her construction, but beautifies it.

How many objects of ordinary use are rendered monstrous and ridiculous, simply because the artist, instead of seeking the most convenient form, and then decorating it, has embodied some extravagance to conceal the real purpose for which the article has been made!—A. W. Pugin.

By means of design we inscribe, or ought to inscribe, upon every object of which we determine the form, all essential particulars concerning its material, its method of construction, and its uses.—M. D. Wyatt.

The primary consideration of construction is so necessary to pure design that it almost follows that when style and ornament are debased, construction will be found to have been first disregarded; and that those styles which are considered the purest, and the best periods of those styles, are just those wherein constructive utility has been rightly understood and most thoroughly attended to.—Redgrave.

All common and useful things may be refined into objects of beauty; and though common, all that is beautiful or high in art is merely an elaboration and refinement of what is fundamentally a useful and necessary art.—Fergusson.

Beauty is produced by the pleasing appearance and good taste of the whole, and by the dimensions of all parts being proportioned to each other.—Vitruvius.

If nature has made the human body so that the different members of it are measures of the whole, so the ancients have with great propriety determined that in all perfect works each part should be some aliquot part of the whole. Proportion is that agreeable harmony between the several parts of a building which is the result of a just and regular agreement of them with each other—the height to the width, this to the length, and each of these to the whole.—Vitruvius.

Those arts are generally considered the most worthy in which the mental labour employed and the mental pleasure produced are greatest, and in which the manual labour, or labour of whatsoever kind, is least apparent.—Sir Charles L. Eastlake.

All these, with the exception of Vitruvius, may be taken as merely asserting something in the nature of half-truths, which, as Epictetus says, "may be all false."

Professor W. Knight in the preface to his work on the *Philosophy of the Beautiful* gives his opinion that "Accurate knowledge of previous speculation is always our best guide in the study of a pro-

blem that is perennial; and while the history of philosophy shows that the most perfect theory is doomed to oblivion no less certainly than the imperfect ones, and that they all revive after temporary extinction, we can contribute nothing of value to the controversies of our time by striving after an originality that dispenses with the past." That the philosophers and others, from the most ancient of times up to the present, have never lost touch with the principles of rhythm and proportion in their reasonings, will be manifest if extracts are taken from their works. Professor Knight has collated such extracts in a very admirable manner, and probably his history is the best as regards historical sequence.

Dealing with Greek philosophy, surely most will agree with Professor Knight that the tendency was to bring all into harmony or into an harmonious whole, whilst the modern tendency is to divide and sub-divide, until it has missed the unity that underlies division. It is interesting to note that Euphranor, who was a painter and sculptor, wrote a book *De Symmetria et Coloribus*, and Professor Knight states that from Pliny down to Hirt (*Geschichte d. bild. Künste*) the symmetrical excellence of his own work has been noted. The value of this work to students lies in the fact that both in his practice and his teaching he developed the principles of Art which Greek philosophy had inculcated in its prime. The date of his birth, though doubtful, is given as about 362 B.C.

Professor Knight is of the opinion that the Latin race theorised less than the Greek had done. Relatively speaking there is no theory of the beautiful to be found at all in Roman literature.

When we reach the mediæval period Professor Knight states that, as soon as we see any sign of a revival of philosophy, interest in the problem of the beautiful returned as one of its elements. We have really little of note that would be of interest in a Paper like this until we come to the fifteenth century, when Savonarola (1452–1498), who was really a religious teacher, deals with the subject of the beautiful in one of his sermons for the Third Sunday of Lent. "In what does Beauty consist?" he asked. "In colour? No. In form? No. Beauty, as regards composite things, is born of the correspondence of parts and colours. The beauty of simple things is in their light. Behold the sun and the stars, their beauty is in the light they shed; behold the spirits of the blessed, their beauty consists of light; behold, God is light: He is beauty itself. The beauty of man and woman is greater and more perfect the more resemblance it hath to primary beauty. What then is this beauty? It is a quality resulting from the proportion and correspondence of the members and parts of the body. Thou dost not call a woman beautiful on account of her beautiful nose or hands, but when all is harmony. What is the source of this beauty? On investigation, thou wilt see that it emanates from the soul." Then we have Albrecht Dürer (1471–1528). His two chief works are the *Book of Measurements* and the *Book of Human Proportions*, and he says, "I have heard how the seven sages of Greece taught a man that measure is in all things (physical and moral) the best. Those arts and methods which most approximate to measurement are the noblest."

In dealing with the philosophy of Germany, as far as this Paper is concerned we have Kant, who, after dealing with negatives as to beauty, says in conclusion that we call things beautiful because our faculties work harmoniously in regard to them. With reference to Rudolf Hermann Lotze (1817–1881) Professor Knight considers that his specific teaching on the subject of the beautiful is not nearly so valuable as his criticism of the philosophical theories of others. He held that the things we call beautiful do not please us as individuals only, they please the universal spirit in us. The beautiful in itself cannot be a characteristic common to all beautiful objects. Beauty, however, actualises itself, both in the types of individual beings and in events. It is disclosed in their characteristics, and in the agreement between the free activity of any single living being and the universal laws of nature it finds expression. To impress us as beautiful, art must first please the senses (a physiological condition); it must secondly conform to general laws (a psychological condition). In other parts of his philosophy Lotze was much influenced by Herbart, but in the æsthetic he took a line of his own. Hans Christian Oersted (1777–1851), Professor of Physics at the University of Copenhagen, wrote papers on the Philosophy of Nature which with other papers were collected and translated from the German in 1852 by L. and J. B. Horner. Here we have dialogues on the principles of beauty, the natural philosophy of the beautiful, and the unbeautiful in Nature in its relation to the harmony of beauty in the whole.

The outcome of the first of these dialogues (says Professor Knight) is that the pleasure we derive from beauty depends both on reason and on the senses. Musical tones, for example, contain a hidden reason within them. Symmetrical figures, which delight us, do so because of the reason that is in the symmetry. They are conformable to rule, *i.e.* to reason. The circle is a perfect figure because it unites so many characteristics in its unity. It is not a mere abstract conception. It is an entity that is in itself beautiful, because of its essential idea. We find in the circle symmetry, completion, wholeness, unity in variety. The external image reaches us through the senses, and delights us, without our being conscious of the ideas which it contains and which lie within it. In the whole realm of inorganic Nature we find geometrical forms which are beautiful; and when we pass to organic Nature the lines and angles of crystalline beauty are exchanged for the curves and sinuosities of life and organisation. As symmetry lies hid in crystals and organisms, reason lies hid in tones. It lies there, on a firm foundation within our nature, not in sense only but in reason."

The two chapters on the natural philosophy of the beautiful were written later still. In them are discussed the laws of sound and of colour, in minute detail. We find that Nature produces the same forms as are created by human thought, and that what are thoughts within us are also laws of Nature without us. We thus discover that the laws of Nature are the laws of Reason, and that all Nature reveals the eternal living reason. "Soul and Nature are one, seen from two different sides."

Dealing with the philosophy of France, we have Descartes, whose letters were published in 1683; his views are sufficiently expounded for the present purpose in the extract above given from Combarieu. The characteristics of beauty, according to Crousaz (1663–1748), are variety, unity, regularity, order, and proportion. Subsequently he seems to lay chief stress on the threefold characteristic of unity in variety, proportion, and fitness. An object is beautiful (1) when it includes within it diversities reduced to unity, which occupy the mind without fatiguing it; (2) when it has proportion well sustained; and (3) when it is well fitted to its place. We do not require, however, to postpone our judgment as to the beauty of an object until we recognise these three things as present, because beauty forces itself upon us spontaneously. It triumphs over us, and our heart responds to it without the aid of reason. The question then is, has it a basis in the nature of things, or is its basis caprice? To determine this we must go to the root of human nature, and to the radical principle of the universe, which is harmony. Montesquieu (1689–1755) lays down the law that whatever we see at one moment should have symmetry; what we see in succession, variety. A. C. Quatremère de Quincy (1755–1849) says that the least analysis shows that the beautiful is composed of a principle of unity allied to variety, a principle of order and harmony, truth and utility—qualities which can be appreciated in theory, and applied in practice only by the union of reason, intelligence, imagination, and feeling—faculties existing in all men, but which are in the greater number inert. In 1867, Charles Blanc, member of the French Institute, discusses architecture, sculpture, and painting. He asserts that the sublime may be found in chaos, or the horrible, but beauty requires order, proportion, and harmony. M. Auguste Laugel emphasises the principle of order and harmonious proportions. He says: "The Beautiful cannot have its origin in tumult, in the echo of a set of sounds in which no measure or harmony can be discerned; nor can it be found, amongst the plastic arts, in a miscellaneous medley of colours and of lines. The ideas which the arts express must be made intelligible through forms and figures, light and shade, &c. . . . If there is no common measure, if contrasts are not managed with skill, if the small and the large, if light and shade, if the simple and the rich jostle with each other and are intermingled without judgment and without rule, all pleasure is lost, because the idea and the thought which underlie the material envelope do not exist." In 1883 the Abbé P. Vallet, Professor of Philosophy in the Séminaire d'Ivry, in his fourth of five elements of beauty, affirmed that "Unity must be found underneath variety, as that which animates the whole. But everything must not be sacrificed to this unity. If the unity is absolute, beauty is destroyed. It must be possible to disentangle the principal idea from the innumerable details which surround it, but it must not be presented naked and solitary; we must still retain "l'intégrité, la mesure, l'harmonie, le mouvement, la vie." Jean Marie Guyau (1854–1888) affirms that in life, morality, science, art, and religion, there is an absolute unity. Great and serious art is that which maintains and manifests this unity.

Dealing with the philosophy of Italy, Professor Knight says that the course of philosophic thought on the subject of the Beautiful has been more mixed up with the progress of the arts in Italy than in any other European country. Leon Battista Alberti (1400–1485) looked to Vitruvius as his master, and so did Peruzzi and Palladio, but Professor Knight thinks the most important link between *De Architectura* of Vitruvius and the modern books of Mr. Hay (who reverted to him explicitly) is the *Harmonices Mundi* of the astronomer Kepler. This book was published in 1619, and is divided into five chapters, entitled respectively: (1) Geometricus, (2) Architectonicus, (3) Harmonicus, (4) Metaphysicus, and (5) Astronomicus and Metaphysicus. In it the principle of symmetry and proportion is recognised as running through all things, and resulting in the "music of the spheres." The relations of musical and figure harmony are discussed, and this is a strict development of the principle of Vitruvius, by whom the principles of music were applied to architecture.

In Holland we have some views on the philosophy of the Beautiful. J. F. van Beeck Calkoen (1772–1811), Professor of Philosophy in Leyden, gives his conclusions on the subject of the Beautiful as follows: (1) What is perceived by the senses is beautiful, if its parts are arranged and combined after an intellectual order or law. (2) When we feel that anything is beautiful, that feeling is awakened by our discernment of the relation between the intellectual and material. Intellectual unity is always the foundation of the Beautiful. From this he infers, among other things, that in architecture, sculpture, and painting, Beauty lies in a mathematical order, by which the relation and position of lines and planes are fixed. The artist perceives this equation of lines and planes at once by sight, feeling, and inspiration through a mathematical fact. H. G. A. L. Fock (1875), in his remarks on symmetry or graceful proportions, states that those that are most pleasing

could be expressed by small numbers. If a line of say 130 possible sections be divided into thirty, forty, and sixty, such would be divided symmetrically, these proportions being expressed in the numbers three, four, and six. If divided into twenty-two, seventy-nine, and twenty-nine there would be no symmetry, because the proportion can only be expressed in the larger numbers. Professor Knight goes on to say that Fock is of opinion that the lost theory of Polycleitos, which he explained by a model figure, and by which he taught what the respective lengths of the different parts of the human body must be in order to give a graceful well-formed whole, was based upon this symmetry of proportion. He then proceeds to explain how this same symmetry is found in the dimensions of the Pyramids, the Greek temples, the Gothic cathedrals, in ceramic objects, gold and silver work, &c.—in short, in all true works of art, in endless variety ; also in the construction of the human body, and that of different animals. He believes this symmetry, in its new meaning, to be a condemnation of Zeising's aurea sectio, which is the division of a line (=1) into two such parts (a and b) that a : b : : b : 1, an æsthetic significance, in that it furnishes the most perfect means between absolute equality and absolute diversity, or between expressionless symmetry and proportionless expression, or between rigid regularity and unregulated freedom. J. van Vloten (1881) affirms that the principal rules to which all works of art must conform are method, unity in diversity, symmetry, and proportion, and that Adolf Zeising's well-known aurea sectio is the law that lies at the root of the study of proportion.

In English philosophy the first important statement is that of Lord Bacon : " That is the best part of Beauty which a picture cannot express ; no, nor the first sight of the eye. There is no excellent beauty that hath not some strangeness in the proportion." The first Lord Shaftesbury, in his *Miscellaneous Reflections* of 1774, affirms that what is beautiful is harmonious and proportionable, what is harmonious and proportionable is true, and what is at once both beautiful and true is of consequence agreeable and good. George Berkeley, Bishop of Cloyne (1684–1753), in a dialogue on Beauty asserts that all minds have ideas of order, harmony, and proportion. In 1814 S. T. Coleridge, in his *Essays on the Fine Arts*, says that the discernment of the harmonious relation of the parts of a thing each to each, and of all of them to the whole, at once and intuitively excites in us a feeling of delight. This is wholly different from a sense of what is agreeable, and it is in a sense intermediate between it and a perception of what is good. The scent of a rose may make it more agreeable to us, but it does not add to its beauty. John Flaxman (1829), in his *Lectures on Sculpture*, affirms : that Beauty is not merely an imaginary quality, but a real essence, as may be inferred from the harmony of the universe. Hazlitt (1819) says that Beauty consists in gradation and harmony. Henry Howard, R.A., Professor of Painting at the Academy (1834), dealing with the beauty of form, maintains that certain forms are beautiful intrinsically, apart from association ; and, referring to the theories which find the essence of beauty in " fitness, propriety, harmony, perfection," he says that they all virtually admit proportion to be an essential element of beauty, which he thinks a primary and universal element. Dr. M'Vicar of Moffat (1837), in his work *On the Beautiful, the Picturesque, and the Sublime*, asks, why is the symmetry of objects a source of beauty ? and why is the expression of objects increased when their mere symmetry is destroyed ? He answers that symmetry is the condition of perfection in organic bodies. Nature is everywhere endeavouring to realise equilibrium, in symmetrical and stable products. It is so from the structure of the solar system down to that of the flower. Thus simple Beauty has its signature in Nature ; it is not a creation of the mind. For our purpose it will be useful to quote Professor Knight's summary of D. R. Hay's *First Principles of Symmetrical Beauty*, Edinburgh, 1846. In it he tries, as he says, to develop the principles of Symmetrical Beauty, and their application to the arts, in a popular manner. Mr. Hay knew nothing of Plato when he began his studies, but he worked on the Platonic lines. He believed, as Sir Isaac Newton did, in " general laws with respect to all the senses," and therefore that there was an underlying analogy between the principles of form and those of sound. He laboured very much, as Michael Angelo did, with a view to discover the principles of Beauty. Of Æsthetics he says :

> In this science the human mind is the subject, and external Nature the object. Each individual mind is a world within itself, but the individual mind and the world at large have a relation to each other. The subject is affected by the object. . . . The science of æsthetics is devoted to the investigation of the mode in which external objects affect the mind, to please or to displease it, to produce a sense of harmony or of discord. Harmony is, as Aristotle defines it, the union of contrary principles having a ratio to each other. . . . The contrary principles are those of uniformity and variety, which give rise to two distinct kinds of beauty, according to the predominance of one or the other of them in an object. The one may be called symmetrical beauty, and the other picturesque beauty; the first allied to the principle of uniformity, in being based upon precise laws ; the second allied to the principle of variety to so great a degree that no precise laws can be laid down for its production.

He proceeds to show the operation of harmonic ratios, first on rectilinear figures, and then on curvilinear ones ; and tries to prove that by their union the laws of harmony are evolved, and that the principles of harmony which he has set forth are a natural and an inherent quality in geometry. In the *Science of Beauty, as developed in Nature and*

applied in Art, Mr. Hay expands his doctrine, his aim being to prove scientifically that the beautiful in Nature and in Art, which appeals to the mind through the eye, is governed by the same laws as govern the ear ; in other words, that Beauty must conform to the laws of Nature in the plastic art of painting, as well as in the sister art of music. In this he was partly anticipated by a work, published in 1831, *The Music of the Eye ; or, Essays on the Principles of the Beauty and Perfection of Architecture*, by Peter Legh, in which the resemblance of music to architecture is traced at some length, architecture being called the music of the eye. Mr. Hay says his aim is to rise superior to the idiosyncrasies of different artists, and to bring back to one common type the sensations of the eye and of the ear. He repeats almost verbatim the analyses and the contention of his former book, that symmetry gives rise to Beauty, and variety to picturesqueness. The science of Beauty is evolved from what he calls the " harmonic law of Nature," which is based on the Pythagorean system of numerical ratios. He applies it first to sound, afterwards to form (especially as seen in the form of the human head, countenance, and figure), and lastly to colour, and the proportions of ancient Greek vases and ornaments. He considers all æsthetic science as " based on the great harmonic law of Nature, which pervades and governs the universe, and which lies, as such, intermediate between the physical and the metaphysical sphere."

Professor Knight, citing with approval a review of Jeffrey, M'Vicar, and Hay in *Blackwood's Magazine* for December 1853, says :

> The writer holds that, if there be no standard of the Beautiful, " novelty " is all that is left to us in art-work. We can no longer speak of the great masters, or of any masters. If association can explain the Beautiful, then the study of æsthetics is but labour lost. (1) Beauty is, on the last analysis, but another name for perfection. The beauty of individual things is various ; but the beauty of all beautiful things agrees in this, that they all approach perfection, and delight us according as they do so. (2) Beauty (which is perfection) is " as diverse in its forms as the several faculties and organs by which we come into contact with Nature." (3) These forms of the Beautiful are divisible into two great classes, viz. the intellectual and the material.

In his criticism of the association theory, the writer asks how it comes to pass that a circle is regarded, " semper, ubique, et ab omnibus," as more beautiful than an irregular figure, unless there be a standard of beauty in the mind ? So also with colours and sounds. Differences in taste prove nothing against a standard, because each taste may have a standard for itself, and yet they may all vary, just as Greek and Gothic architecture vary, or as the several types of heroic action do. The writer affirms truly that " the beautiful and the good stand together on the same pedestal." We cannot hold by the one and despise the other. Acoustic science shows that the beautiful in music is based on certain objective harmonious ratios ; so with the beauty of colours. Unity and variety are the two grand elements in all fine art compositions ; and unity in variety (in other words, symmetry) is the first thing to be attended to in æsthetical science.

In considering the elements of beauty, William Scott (1861), an artist, begins with harmony of parts as the first and most necessary condition. The second condition is symmetry, every living creature being composed of two halves, each the exact counterpart of the other. All architecture is the triumph of symmetry. Professor J. F. Seeley, in a paper on the " Elementary Principles of Art," says that the different arts answer to different faculties, but in all of them delight is expressed by rhythm or proportion of some kind ; and this rhythm, which runs through our whole existence, and without which life would be comfortless, is the principal thing in art. It is present in painting, sculpture, and architecture, no less than in poetry, music, and dancing. Rhythm is regularity in time, and regularity in space is form. This gives us the first principle in art, but added to it there must be imitation. This is the second of the two primary principles. It is imitation which is the passive principle in art, that gives to it its boundless range ; whereas the other (rhythm or proportion) is the active shaping principle. By the one we find what exists in Nature, and reproduce it ; by the other we give a new interpretation to what we find. Dr. Todhunter, M.D. (1872), finds that order and proportion are conditions of the Beautiful, order being symmetry, proportion being harmony. He deals with the seven colours of the spectrum in relation with the seven notes of the musical scale. Dr. Todhunter asks what is that which speaks to us through forms, colours, sounds, and what does it say to us ? He answers that it is something that we instinctively recognise as good and right in and for itself, no product of blind forces, but of forces working intelligently and with mutual helpfulness to a definite end. Through it we pass beyond ourselves to the Divine.

May it not be said that originality is a species of conceit ; of over-confidence ; a desire to attract attention by oddities ; a proof of the lack of ability to improve upon previous productions ; lack of the desire for and of the necessary knowledge to accomplish this and prove it ; hence decadence ?

Great artists and architects have never hesitated to copy the works of one another. Why should lesser minds hesitate ? Is it only because they wish to be original ? To such an extent has the pride of originality grown, that the Royal Institute of British Architects has been compelled to support a Copyright Bill in Parliament. This may have the effect of throwing us back upon tradition, permeated by the spirit of advanced scientific reasoning. Such method would make for progression upon right lines.

If we are to succeed, we must find one common

rule applicable to all, not only to architecture, but to music, dancing, painting, poetry, and all objects whatever their utility. This one rule, it is submitted, is harmony, which springs from rhythm, which springs from measurable and synchronous vibrations: in architecture, that which we call proportion. Buildings raised upon a skeleton frame of proportional spacing of lines, upon which, and around which, we construct proportional voids and solids, one unit to each building, subdivided in measurable proportions, even down to the smallest ornament, might be a solution of this problem of rhythm and harmony in architecture. Some objector may ask, all buildings in one street, or adjoining one another, on one unit? The reply would be: "It is desirable they should be on proportional units." Individual bands within earshot of a listener but not of one another, although playing one composition, the pitch and time varying, are distressing; but when massed and playing the same composition, the pitch and time agreeing, are pleasurable.

Is it, or is it not, strange that terms used in music and art are synonymous, such as "Tone," "Harmony," and many others? Architecture has been called frozen music—is this not very near the truth?

Architects look to the visible parts of a building, never search for invisibles, assuming there are none, yet these are the true essentials of higher architecture. Not to do so is a species of laziness or indifference. Men who state that they use their eyes only are labouring under a delusion. They are fighting against their intelligence. If it is remembered, and clearly kept in mind, that the eyes are media to the intelligence, much confusion will be avoided. The sketchers and picture makers do little towards the advancement of higher architecture. Some, indeed, trouble to inquire why the building was erected, but these are few. They fill their books with portraits of buildings but know nothing of their characters.

No information of the actual use in practice of interaxial or of proportional lines can be found, only the theory. What has been given to-night has been collected during the perusal of the works of the authorities given, and notes made of matter which might tend to prove that by such means alone can the higher knowledge of architecture be obtained. Try as you will, information cannot be had of the method of putting into practice the rules and principles of the Greeks. Where to search it is difficult to ascertain. That it will be obtained from some source other than books on architecture there can be little doubt. To-night, extracts from unusual sources have been the means of laying before you theories or principles, and are the result of reading outside the beaten track. We shall have to go further afield yet before the true principles can be collected. Where next to look for information it is difficult to say.

I have not put up a building yet without using the method of interaxial lines, which may be a sound reason for rejecting it. The work is set out by rods of the unit length prepared in the following way:—A piece of pine 6 inches square is cut to the die true length of the unit and accurately squared at the ends. From this 16 rods are cut, 1½in. square—these only are used, and the men have no rules or scales, simply these data. They find no difficulty—in fact, all have found simplicity. For cottages and lodges I have used the unit of 3 feet 3 inches, houses 4 feet to 5 feet, schools 5 feet 3 inches, clubs 5 feet 6 inches and 4 feet 9 inches, works 10 feet, 15 feet, and 20 feet, furniture and ornament some measurable unit of the main unit. The drawings made for the Art Gallery, a sketch of which was published in the *Manchester Guardian* for 4th March 1905, had a unit of 10 feet, and multiples of 10 inches (three courses of brickwork) were taken as the depths of the beds of ashlar. Each block of building was proportional to the other in mass and in detail.

I do not purpose to give any illustrative diagrams. It would be useless to do so unless what I have adduced has been sufficiently conclusive evidence to go on with the work, the magnitude of which is such that a lifetime would not suffice. We have lost the nature of the practice of the ancient Greeks: is it possible to regain it? It rests with us, at least, to make an effort. This paper is a very slight contribution in aid. Science, it is submitted, is the highway by which the solution may be reached. Remember that the Greeks have laid down clearly that you must search for rules by which to work; have told you that true reason is necessary to art; that rhythm is not common to art, but is the foundation to everything necessary for the Chief Good. The Chinese affirm that it is necessary to know music in order to know how to rule. Lastly you have Combarieu, who, I think, proves from many authorities what the Greek has stated—that the law of numbers rules the world, or rather the properties inherent in vibrations, measurable and synchronous, harmonic, rhythmical, and in consonance, are of the essence of the Chief Good in Life.

What is this "Life," this something that creeps into all science, art, philosophy, and physics, when and where ever debated? We know it to be something invisible—is it power? We know that power is necessary and antecedent to the making and the doing of anything, and that it is invisible. It is inconceivable that power was not antecedent to creation. This power must have always been, always will be, and there was never a time when it was not. This power is the Uncreated Creator, and is disseminated through everything, and is that which we call Life. It is inconceivable that there should be any but the One Power, that which the Greek philosophers call God, and which we call Almighty God—the Original and only Power.

REVIEWS.

ROMANESQUE ARCHITECTURE IN FRANCE.

L'Architecture Religieuse en France à l'époque Romane: Ses Origines, Son Développement. By R. De Lasteyrie. 4*o. Paris*, 1912. [*Alphonse Picard et fils*, 82 *rue Bonaparte, Paris.*]

This very valuable book is likely to take the place of all previous ones on its special subject. The name of M. de Lasteyrie alone sufficiently guarantees its excellence. Its title, however, hardly covers its contents, for of its 720 pages of text the first 140 are devoted to the history of the origin and plan of the basilica, and 80 pages to Carolingian architecture.

The first of these two parts, excellent as it is, seems rather unnecessarily detailed, for as the author admits that France possesses hardly any religious building older than the ninth century, the immediate influence of the earlier buildings still remaining in Italy has been but slight. All that is said about them is of great interest, though in common with all the chief modern archæologists he considers them to be generally of later date than used to be thought, except in the case of the nave of St. Lorenzo fuori le Mura at Rome, as to which he adopts Rossi's view that it formed part of a fifth-century church with an eastern apse, and that Pope Honorius in 1216 did not build it, but by destroying both apses, which were back to back, simply threw two churches into one. He agrees, and no doubt rightly, with what is the general opinion at present, that the origin of the plan of the Christian church is to be found in that of the Roman house. In explanation of the statement of Vitruvius that basilicas existed in some of the larger Roman houses, a passage is quoted in which he speaks of the œcus or central hall in Egyptian houses as having columns carrying a wall with windows, expressly comparing it to a basilica, a name applied to any building, even to a riding-school, which was lighted in this way.

In accounting for the use of arches rather than of entablatures on columns, he might perhaps have laid stress on the gradual failure of the supply of the marble tribute sent to Rome during the earlier Empire. When the early Christians could get or steal blocks of sufficient size for an entablature they generally used them, as in S. Lorenzo and Sta. Maria Maggiore. But the preference for the arch was undoubtedly growing before the Empire became Christian, as may be seen in the Palace of Diocletian at Spalato and in the buildings of Central Syria.

As to Carolingian buildings, he considers that practically none are left in France except Germigny-des-Prés—the Basse-Œuvre of Beauvais dating from about 990, while St. Remi of Reims, Montiérender, and Vignory are all of them eleventh century. The different points of view of French and German archæologists are frankly admitted by him in speaking of Steinbach and Lorsch, which the Germans consider to be of the ninth century, but which would, according to the views which have prevailed in France for the past forty years, be considered to be of the eleventh. We confess that we think that the Germans are right in attaching less importance to documentary evidence than the French do. It does not always follow when a building is said to have been burned and restored that it was completely rebuilt.

On the mysterious question of the interlacing knotted twist, so common from the seventh to the ninth century, our author agrees neither with Cattaneo who calls it Italo-Byzantine, nor with Rivoira, de Dartein, and others who attribute it to the so-called Comacine masters of North Italy. He denies that the name Comacine is in any way connected with Como, but there certainly is an island Comacina which was the last stronghold held by the Imperialists against the Lombards.*

There undoubtedly was greater continuity between the Roman Collegia and the mediæval guilds than is usually allowed for, and this continuity would account for the strongly classical character of the south of France Romanesque, since Roman traditions and organisation retained their vitality much longer in Provence than elsewhere. Whether the twists were the sign manual of the Comacines, or were brought with them by the northern barbarians, it is impossible to say; personally we believe them to be of classical origin. The fact that the cathedrals, except Chartres, were much less important centres of pilgrimage than the abbeys is well accounted for by their having existed before the worship of relics attained its great development; and the same fact explains why the monks were often their own architects, and excuses the error into which Viollet-le-Duc fell of sharply distinguishing the monastic and the lay schools of art. Architecture was a layman's art from the first. There was no such thing as a universal Benedictine style, though the Cistercians very nearly established one of their own, as Mr. Bilson has clearly shown. The whole question of vaulting is carefully and clearly treated, and the opinion of Rivoira that the ribbed vault was employed by the Romans is refuted. Their brick ribs were drowned in the vault, and were not like the true rib, a mere centering carrying independent panels. He claims its invention for the Ile de France and St. Denis, and rejects the claims of Durham, Morienval, and Lusignan; but the fact is that the idea of the ribbed vault was "in the air," and it appears all over Western Europe at about the same time—during the first thirty years of the twelfth century. M. de Dartein was certainly wrong in attributing its origin to S. Ambrogio of Milan or S. Michele of Pavia.

A protest is rightly raised against the confusion

* *V.* Hodgkin, *Invaders of Italy*, vol. v.

introduced in the eighteenth century into the use of the word "ogive" by its being taken to mean a pointed arch. It means the diagonal rib of a Gothic vault and nothing else, and M. de Lasteyrie rightly employs "arc brisé" for the pointed arch.

As for the dome on pendentives of the churches of Aquitaine, it is claimed that it was either a tradition handed down from Roman times, or derived from S. Vitale. Like Mr. Phené Spiers and M. Brutails, he refuses to see in it any traces of Byzantine influence, owing to the differences in construction, outline, and general structure.

Chapters ix. to xii. are a very careful and elaborate analysis of the plans and details of Romanesque churches. If we are allowed to criticise work so thoroughly done, we would say that works from widely separated districts are too often placed side by side for comparison as if there were some close relation between them. We are glad to notice the warm admiration expressed for the wide aisleless naves, such as Toulouse and Angers. It may be of interest to note in passing that just before the German war the clergy of Toulouse were doing their utmost to get their splendid Romanesque nave destroyed, and replaced by one in the style of the fifteenth century to correspond with the choir, and it is to the credit of Viollet-le-Duc that he prevented this act of vandalism by insisting that if anything was destroyed it must be the choir in order that it might be rebuilt to match the nave. In speaking of the great Romanesque and Norman triforium galleries the view is adopted that their purpose was in no sense liturgic but purely architectural. They were intended to prop up the walls of the nave or buttress its vault, as they still do at Gloucester. In the original cathedral of Le Mans, however, there were six altars in the "deambulatory," which the author (p. 187) takes to mean these triforium galleries. But it is difficult, in spite of their being said to be "sursum," not to think that the apsidal aisle is meant with its ring of chapels.

Chapter xi. is devoted to the exterior of Romanesque churches. The first point noticed is how by the eleventh century the exterior of the churches was beginning to be considered and not only the interior, even in towns where the buildings were crowded against one another. Above all is to be noted the beautiful grouping of the apse and its "absidioles," with perhaps a central tower, as at St. Sernin of Toulouse, where, however, the original character has been partly destroyed by Viollet-le-Duc's substitution of large slabs with ugly raised joints for the original roof.

One difference is to be remarked between these early and the later cathedrals in their possession of cloisters, which had become desirable since in the eighth century St. Chrodgand had instituted canons subject to a quasi-monastic rule for the secular priests.

The origin of tower-pinnacles is neatly explained by the need for some weight on the diagonal arches, which change the square of the tower to the octagon of the spire in order to prevent their rising (p. 397).

In chapter xii., after examining the various schemes of classification of De Caumont, Viollet-le-Duc, and Quicherat, the author adopts one based on the roofing system into eight schools, which he names after the provinces in which they took their rise, but to the geographical boundaries of which they were by no means limited, as ecclesiastical divisions had at least as much influence as geographical. His eight divisions are those of Provence, Burgundy, Auvergne, Poitou, Normandy, the Rhine, and the Ile de France, and the domed churches of Aquitaine. As regards our Anglo-Norman buildings, he differs from Mr. Bilson in considering that the vaults of Durham, instead of having been finished by 1133, are not older than those of St. Denis. He denies that the statement of the Chronicle that the cathedral was finished "*usque testudinem*" at the death of Flambard, 1128, means that the vaulting was finished, because he says "*testudo*" in mediæval Latin means the *covering* (*i.e.* the roof), and that when it means vaulting it has the epithet *lapidea*. In this contention he is probably correct, but he does not thereby destroy Mr. Bilson's view, which is founded on a most skilful expert examination of the building itself.

The remaining chapters are devoted to a very careful and interesting account of the decoration and details of Romanesque, with beautiful photographs chiefly from the series published by the Monuments Historiques (*e.g.* that on p. 672 from Vézelay). Indeed the book as a whole is most remarkable for the number and beauty of its illustrations. Many of them, like that of Fontgombault, form beautiful little pictures (p. 359). In the views of interiors the points of view are generally skilfully chosen, as in the view of St. Germer (p. 542), where the detail is shown by the bay on the left hand while the rest gives the perspective of the apse, and in the crypt of Jouarre (p. 45).

We notice a misprint on p. 522, line 4 from bottom: "orientale" should be "occidentale."

G. H. West, D.D. [*A.*].
Selsley Vicarage, near Stroud, Gloucester.

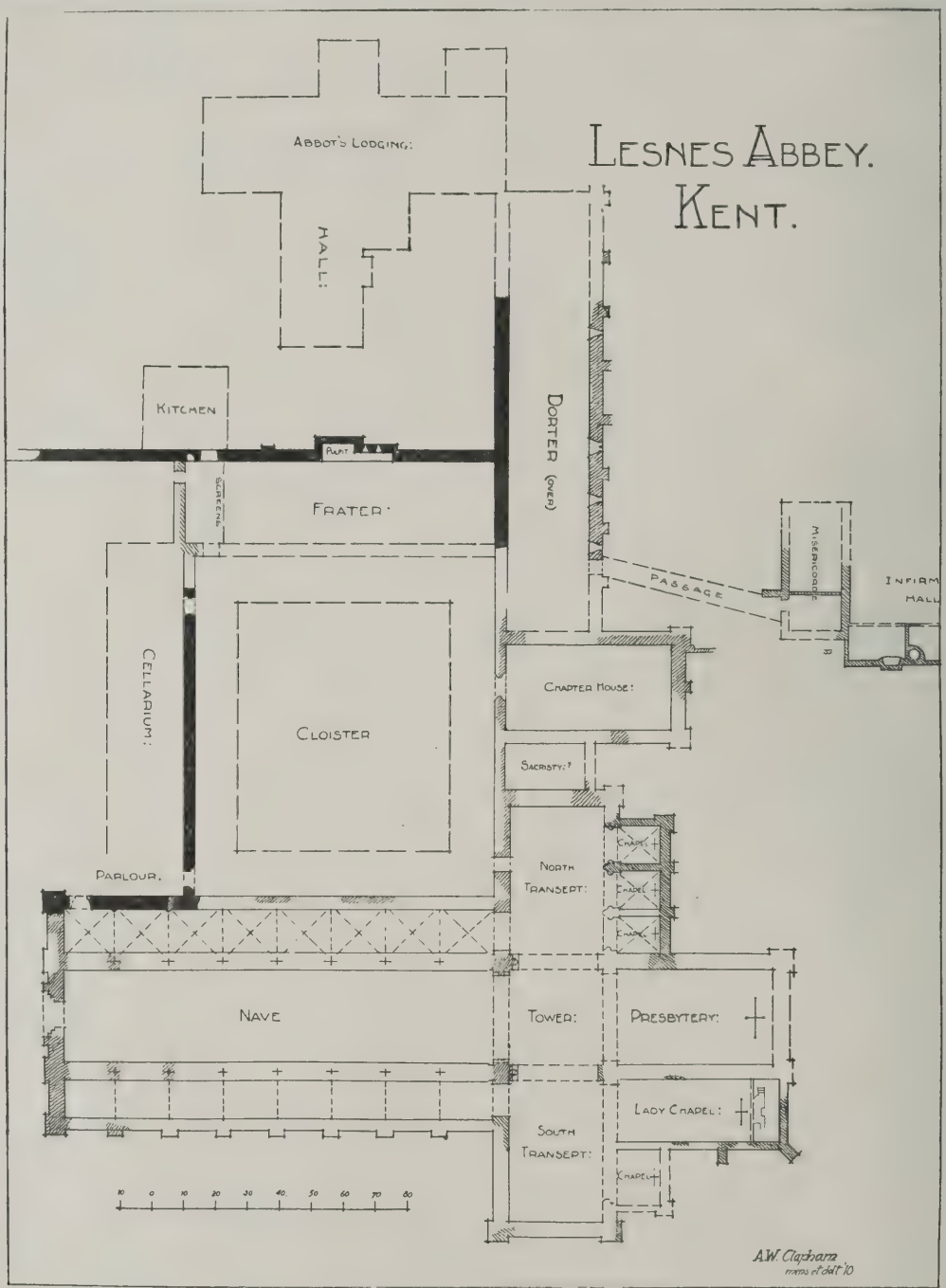
LESNES ABBEY.

The History and Remains of the Augustinian Abbey of Lesnes. By Alfred W. Clapham. [*Transactions of the St. Paul's Ecclesiological Society. Vol. VII. Part I.*] [*Harrison & Sons, 45 Pall Mall, S.W.*]

There are many Societies which to the outside world are known best by their works. In matters ecclesiological and antiquarian, the St. Paul's Ecclesiological Society holds a high place, and its works in the form of *Transactions* are of special interest to all who delight in the past. Such Societies are carrying out a very important public service in the compilation and preservation of records and particulars of buildings such as Lesnes Abbey.

There is still a large field for investigation, for it appears that out of the forty or so abbeys and priories in the County of Kent, only seven have been systematically examined.

The Augustinian Abbey of Lesnes is almost a recent discovery. It is only about three years ago since the Woolwich Antiquarian Society, on the initiative of Mr. W. T. Vincent, and under the supervision of Mr. A. W. Clapham, began a tentative excavation on the site of the old Abbey. The work has proceeded somewhat slowly from lack of funds, but the foundations of the Abbey buildings



GENERAL PLAN OF THE EXCAVATIONS.
From block kindly lent by the St. Paul's Ecclesiological Society.

or at any rate the greater part of them, have now been opened out.

The remains above ground are confined to one or two rough stone walls, probably built with the materials obtained on the destruction of the main fabric. The excavations, however, have revealed the ground plan and foundations of an abbey church of considerable dimensions, and the further excavations still proceeding will, it is hoped, disclose the complete arrangement of the domestic buildings of the Abbey.

The Abbey of Erith or Lesnes was one of the later of the Augustinian foundations, and was founded in 1178 by Richard de Lucy, Chief Justiciar of England. The position which De Lucy held in close connection with Henry II. no doubt brought him on several occasions into conflict with Thomas à Becket, and after the murder of the Archbishop his contrition seems to have found an outlet in the establishing of the new Abbey, dedicated to St. Mary and St. Thomas of Canterbury, and De Lucy himself resigned his office of Chief Justiciar and entered the Abbey shortly before his death.

The history of the Abbey itself presents very few features of general interest, and, during the 350 years of its existence, its inmates pursued the even course of their way without much outside interference from Church or State.

By the early part of the sixteenth century the position of the lesser abbeys had become more and more precarious. Even before the wholesale destruction of the abbeys by Henry VIII. the smaller abbeys were being one by one suppressed and their revenues appropriated for the foundation of colleges or other institutions.

Lesnes Abbey in 1524 shared this fate with more than a score of other small abbeys. Cardinal Wolsey, looking round for fresh sources of revenue for the establishment of a new college, sought and obtained the papal licence to suppress a number of monasteries with not more than seven inmates. A considerable number of abbeys thus came within his power, and twenty-four in all, Lesnes amongst the number, were suppressed and their revenues diverted to educational purposes.

The annual value of Lesnes Abbey at its Dissolution is given as £186, so that by that date, and with less than seven inmates, it seems that the abbey must have largely outrun its usefulness, and its closure thus came in the ordinary sequence of events.

Mr. Alfred W. Clapham gives the following particulars of the Abbey: "The position of Lesnes Abbey, half-way between Plumstead and Erith, must once have been pleasant enough. It commands an extensive prospect over the marshes, the river and the low-lying Essex shore, and the ground that rises steeply behind is thickly covered with wood, the crest having an irregular and diversified outline, which is still unspoiled by building."

The excavations under Mr. Clapham's supervision have already extended over the site of the church, chapter house and parts of the infirmary, dormitory and frater house.

The church lay for no apparent reason on the south side of the cloister, as at the parent house of Holy Trinity, Aldgate, at St. Mary Overie, at Waltham, at Cartmel, and a number of other Augustinian houses. No part of it was ever used for parochial purposes, and consequently only one fragment now remains above ground.

The plan adopted was the typical Cistercian one of the aisled nave, transepts with eastern chapels and aisleless choir, the dimensions of the nave being 140 feet by 65 feet 6 inches, and comprising eight bays, and the transept 126 feet long by 29 feet wide, three small chapels being formed on the eastern side of the northern arm, and the Lady chapel leading from the south transept. The whole of the details so far excavated are Transitional in character.

W. R. Davidge [*A.*].

FROM INIGO JONES TO SIR CHARLES BARRY.

London County Council Survey of London. Issued by the Joint Publishing Committee representing the L.C.C. and the Committee for the Survey of the Memorials of Greater London, under the General Editorship of Sir Laurence Gomme and Philip Norman. Vol. III. The Parish of St. Giles-in-the-Fields. Part I. Lincoln's Inn Fields. 4*o. Lond.* 1912.

There are certain parts of London familiarly known throughout the world, not only in an historical sense but mainly for the architectural charm they possess; in this regard Lincoln's Inn Fields stands pre-eminent. Even putting aside the aristocratic character of the *mise-en-scène*, it would not be possible to find a similar spot from which to survey the building tendencies of the past three centuries. In the works of Inigo Jones, John Webb, Sir John Soane, and Sir Charles Barry, which constitute the chief architectural interest of the place, is discernible the evolution of a sustained and intellectual movement. Moreover, a spirit of repose pervades the old-world precincts in marked contrast to the cacophony of Kingsway.

The question of the authorship of the houses forming the three sides to the Fields, given in the *Prospect of Lincoln's Inn Fields*, or in the 1683 picture at Wilton House, is undecided. It is known that Inigo Jones, in his capacity as Surveyor General and member of a special commission, laid out the Fields into walks; but it seems more probable that John Webb, who at the time was engaged upon the design of the houses in Great Queen Street, should have been the architect; especially as the houses south of the arched opening to Sardinia Street contained staircases similar in detail. The commanding Newcastle House, which even the loss of the modillion cornice failed to divest of dignity, was begun in 1685 under the direction of Captain Wynne, and appears to have

been in an unfinished state five years later. The Lords Commissioners of the Treasury consulted Sir Christopher Wren in 1693, and he prepared an estimate for various alterations; again, late in the eighteenth century, Thomas Leverton renovated the interior, leaving traces of his refinement in many rooms. Towards the close of the seventeenth century Cavendish Weedon published a design for laying out the Fields; this formal scheme embraced a design by Sir Christopher Wren for a central church, an idea which commended itself to Colin Campbell, who in 1712 produced a design for a large church, 280 feet square, to occupy a similar position.

The next building of importance to be erected, in 1730, was the structure now known as Nos. 56 and 57, on the site of an earlier house. It is curious that little light can be thrown on the name of the architect who designed this handsome building for Charles Talbot, then Solicitor-General; the handling of the detail suggests the Italian mind of Leoni. Ralph criticised the building somewhat drastically, and Sir John Soane carried out alterations to the interior as well as adding the semicircular portico, but neither Ralph nor Soane have left any note concerning the original architect. The two houses, Nos. 35 and 36, reflect the austere manner of Sir Robert Taylor, whose work has been but little understood or appreciated; attention should be directed to the beauty of the rear elevation with its interesting fenestration and unique glazing. This architect, prior to the invasion of London by the brothers Adam, enjoyed a large practice, and in addition to these two houses probably carried out the houses forming the sides of Southampton Street. Towards the end of the eighteenth century the Royal College of Surgeons removed from their premises in the Old Bailey to No. 41, and in 1803 George Dance the younger and James Lewis were commissioned to design new premises, the building being completed in 1813. In 1834, additional accommodation being urgently required, Sir Charles Barry was called upon to carry out the alterations, and on his advice the site, with the exception of the portico, was cleared. Barry reused some of the columns from Dance's portico, refluting them, and subordinating the portico to the main portion of the new building by introducing his famous treatment of the 'cornicione'; this procedure at the time occasioned a good deal of comment, and the doom of the attic story was predicted; when, however, the disastrous additions of 1888–9 were allowed, this fine composition lost its meaning. The presiding genius of Lincoln's Inn Fields at the beginning of the nineteenth century was Sir John Soane, who from the vantage point of his own residence, No. 13, carried out many alterations to the older buildings hereabouts. Here he formed the remarkable collection of drawings and objects of art, which during his lifetime were accessible to members of the architectural profession, and which at his death were bequeathed by Act of Parliament to the nation. When it is remembered that Sir John Soane's Museum contains some of the most priceless architectural drawings connected with the history of English architecture, including originals by Clerisseau, Piranesi, Zucchi, Sir John Vanbrugh, Sir William Chambers, the brothers Adam, George Dance, Joseph Bonomi and many others, drawings which even the Institute must covet, it appears strange that the number of architectural students frequenting the Museum should not perceptibly increase. Rich in classic architecture, Lincoln's Inn Fields also boasts an impressive Tudor pile, the Library of the Lincoln's Inn Society, designed by Philip Hardwick in 1843, as well as the refined building on the north side erected some years ago by Mr. Philip Webb.

It would be next to impossible to condense within the scope of a review the absorbing and accurate statements contained in vol. iii. of the *Survey of London*, dealing with St. Giles-in-the-Fields, Part I. No pains have been spared by Sir Laurence Gomme, Mr. Braines and his able assistants to describe the minutiæ of this fascinating centre; to be brief, the record of the district is written for all time. The descriptions of the individual houses have been carefully tabulated and reference made to the Hearth Tax Rolls as well as to the rate books to ensure accuracy. It is romantic to peruse famous names brought to light by a study of these authorities, and of deeper interest to obtain lasting information concerning the activities of English artists. One thing is regrettable, some of the illustrations are small, and the measured drawings few in number; this, however, is a defect which will doubtless be rectified in the next volume.

A. E. Richardson [*Licentiate*].

DRAWINGS OF GREEK ARCHITECTURE AT THE INSTITUTE.

By W. R. Lethaby [*F.*].

By the recent gift to the Library by the Society of Dilettanti of the collection of drawings and engravings made for that learned body, the Institute has acquired much unpublished material of great value for the history of Ionian architecture.

Most of the unpublished drawings were made by Bedford and Gandy, who started on their mission exactly a hundred years ago, and doubtless much which they recorded has since been destroyed.

These drawings and engravings were confusedly mixed and a large number had no names. I have sorted them into some order and I find the chief contents of the collection to be as follows:—

A, Original drawings by Revett for Vol. I. of the *Antiquities of Ionia*, with a set of engravings of the same.

B, Original drawings by Bedford and Gandy for the *Unedited Antiquities of Attica*.

C, Original drawings by Bedford and Gandy for *Ionian Antiquities*; Part III. (1840), with engravings of the same.

D, Original drawings by Pullan for *Ionian Antiquities*; Part IV.

E, F, G, Original drawings by Bedford and Gandy, with a large number of proof engravings of Magnesia, Myra, Telmissos, &c.

These last (E, F, G), comprising perhaps a hundred drawings, and proof engravings without the original drawings, appear to be entirely unpublished.

In the Introduction to the enlarged reissue of the first volume of the *Ionian Antiquities* (in 1821), we are told that Messrs. Bedford and Gandy had been sent to Greece and Asia Minor in 1812, to gather material for "the present work and another now in progress." The large number of fine proof engravings must, I think, have formed part of the proposed new work. One of them is signed by the engraver Freebairn, 1832; another by the same is dated 1834; one other is noted as unfinished in 1834, and a plan of Myra is lettered "Published by the Society of Dilettanti 1837." This part of the work never, I believe, appeared, but in 1840 Part III. of the work was issued (C, above) with engravings of Cnydus, Aphrodisias, and Patara.

We thus have in the collection a large number of original drawings made soon after 1812, and *unique* proof engravings from lost originals made at the same time.

Of this original material the most interesting is a full and accurate survey of the ruins of the beautiful Ionic temple at Magnesia (E). The temple was pseudodipteral, with eight columns at the ends and fifteen on the flanks. Its raised platform was about 100 feet by nearly 200 feet. The positions of the side cella-walls were found. The columns of the fronts were disposed so as to give wide central intercolumniations of about 17 feet, those next being 13 feet 9½ inches and the outer ones a little less. The angle columns were nearly 4 feet 7½ inches in diameter, the others about an inch less. At the S.W. angle the architrave of the front was still lying, its length being 16 feet. The columns were about 38 feet high, of an interesting type of Ionic. The bases were very beautiful, having laurel leaves carved on their toruses. The capitals were also very elegant, the rolls of the volutes being delicately carved with *various* forms of leafage. The details of the capitals and bases are exquisitely drawn, and give, I think, some particulars absent in the recent German account of this temple by Carl Humann. Altogether this English survey, a century old, is of high interest.

The temple at Magnesia was built in 220–200 by Hermogenes, the architect, whom Vitruvius largely used as an authority. It followed the type of Ephesus, and some points are valuable for comparison with that temple. Thus the soffit of the architrave was as wide as the extreme projection of the abacus, while at Ephesus the beam seems to have been even wider than the abacus. The ceiling of the peristyle was of wood; this was the case at Messa too, and I have no doubt at Ephesus also. The steps of the platform were notched down into one another as at Ephesus, and the pediments were without sculptures, as apparently were those of Ephesus and Priene. On the other hand, a sculptured frieze is used here (for the first time in Ionia?). No frieze has been found at Sardis, a work in many respects similar to the Magnesian temple. The bases are of the Attic type which had been used at the Erechtheum.

F is a collection of the monuments of Myra, including a large number of drawings of the strange rock-hewn tombs. One of these, of which there is a coloured drawing, had beautiful sculptured reliefs of the fourth century. These were coloured a bright yellow on an azure ground. Texier gives enlarged details of some of the sculptures.

Other drawings and engravings are of the fine tomb, also engraved by Texier, which had a pediment containing a relief of a lion and a bull fighting. These versions vary a good deal from the published plates, and as Texier is not famous for accuracy they are probably more trustworthy. Another of these tombs is a beautiful example of the type which imitated timbering. It had a pediment with a relief of two warriors. This tomb is identified by its appearing in the general view of Myra in the collection. Probably this drawing is the only existing record of this fine monument. An engraving of another tomb of the "timbered style" shows a pediment with reliefs of a banquet scene. This tomb also seems to be indicated in the general view. One of the many other drawings represents a tomb with a Lycean inscription with letters coloured alternately red and green. Several of the drawings show the sliding stone doors of these tombs. On the back of the water colour of the general view is a sketch of a carved frieze from the theatre of Myra.

G, Telmissos, &c. Here again we have some earlier and more accurate records of the monuments engraved by Texier. One of these is a tomb with two Ionic columns having plain volutes to the capitals which were completed by painting (*cf.* Texier, vol. ii., pl. 175). An engraving represents a tomb at Antephellus very much like the Lycian ark-shaped tombs in the British Museum. Like those, it has pairs of semi-lions projecting from the roof. It is identified by Texier's plate 195, vol. ii. This view shows the other end with different sculptures.

The prints are of the best style of the best period of English engraving, and the drawings are highly finished; all are ready for publication, and to publish them by modern methods of reproduction would not be expensive. Would not the Society of Dilettanti consider the feasibility of adding one more volume to their splendid labours in the past?

9 Conduit Street, London, W., 28*th September* 1912.

COMPETITIONS.

Rangoon Municipal Buildings Competition.

Messrs. Ogilvy Gillanders & Co., of 67 Cornhill, E.C., agents for the Rangoon Municipality, write under date of the 3rd September that they have been advised by cable from the Rangoon Municipality that the time stated in clause 14 has been further extended to 1*st March* 1913. The latest date for posting letters to reach Rangoon by that date will be by the Indian Mail closing in London on Friday, 7th February 1913.

CHRONICLE.

R.I.B.A. Sessional Meetings, 1912-13.

Nov. 4. President's Opening Address.
Nov. 18. Bath and Wells. Paper by Mr. J. L. Ball.
Dec. 2. Business Meeting.
Dec. 16. The Walls of Visby, Gotland. Paper by Mr. Horace Porter, M.A. Cantab. [*A.*].
Jan. 6, 1913. Business Meeting.
Jan. 20. Canadian Architecture. Paper by Mr. F. S. Baker [*F.*] (Toronto).
Feb. 3. President's Address to Students. Presentation of Prizes.
Feb. 17. Modern Hospitals. Papers by Messrs. A. Saxon Snell [*F.*] and Wm. Milburn [*A.*].
Mar. 3. Business Meeting: Election of Royal Gold Medallist.
Mar. 17. Modern French Architecture. Paper by Mr. F. Billerey.
Apr. 7. American Museum Buildings. Paper by Mr. Cecil Brewer [*F.*].
Apr. 21. Modern Steel Construction. Papers by Messrs. F. N. Jackson [*H.A.*] and Bernard Dicksee [*F.*].
May 5. Annual General Meeting.
May 26. Modern Architecture. Paper by Mr. Thomas Hastings (New York).
June 9. Business Meeting.
June 23. Presentation of Royal Gold Medal.

Licentiates and the Fellowship.

The following Licentiates have passed the Examination qualifying for candidature as Fellow:—

CRICKMER: Courtenay Melville, 1 Lincoln's Inn Fields, W.C.
ELCOCK: Charles Ernest, Colwyn Bay.
HAYWOOD: William, 245 Bristol Road, Birmingham.
LITTLE: Owen Cary, 5 Bedford Row, W.C.
MARTIN: Arthur Campbell, 11 Hart Street, Bloomsbury, W.C.
MILNE: Oswald P., 16 Great James Street, W.C.
STREATFEILD: Granville Edward Stewart, 9 Stone Buildings, Lincoln's Inn, W.C.
TATCHELL: Sydney Joseph, 13 Queen Anne's Gate, Westminster, S.W.
WATSON: John, 225 St. Vincent Street, Glasgow.
WILLEY: Frederick, Shincliffe, Durham.

Scholarships in Art.

The Board of Education propose, if there are candidates of sufficient merit, to make the following awards in Art in 1913:—Ten Royal Exhibitions (£60 a year for three years and instruction in the Royal College of Art); six National Scholarships (£60 a year for three years and free admission to the Royal College of Art); not less than fifteen Free Scholarships, entitling each holder to tuition in the Schools of the Royal College of Art; and twenty-four Local Scholarships tenable at Schools of Art recognised by the Board, with allowances of £20 a year each for three years. These awards will be made upon the results of the Board's examinations in Drawing, Painting, Modelling, Pictorial Design, and Industrial Design, or, in the case of candidates in Architecture, upon those of the Intermediate Examination of the Royal Institute of British Architects, to be held in June 1913. The Regulations may be obtained from his Majesty's Stationery Office, price 1*d.*

School of Art Wood-Carving.

The School of Art Wood-Carving, 39 Thurloe Place, South Kensington, has been re-opened after the usual Summer vacation, and it is intimated that some of the free studentships in the Evening Classes are vacant. The School, which is under Royal Patronage, was established in 1878 for the encouragement of the art of wood-carving in this country as a branch of the Fine Arts. It is aided by the London County Council and by the Board of Education. The subjects taught are Wood-Carving, and in relation thereto Design, Modelling, History of Art, Geometrical and Outline Drawing. Forms of application and any further particulars may be obtained from the manager.

Garden Cities and Town Planning Association.

Mr. Ewart G. Culpin, Secretary of the Association, writes:—"The Garden Cities and Town Planning Association is prepared to send lecturers to any part of the country to deal with the great and increasingly important question of Garden Cities and Town Planning. The housing of the workers demands more and more attention as time goes on, and the inquiries which we receive from all parts of the world show how genuine is the desire that something shall be accomplished. In order to focus these aspirations, lecturers competent to deal with all aspects of the case have been

secured, and dates may be booked up. Lectures may be either singly or in series, and I shall be glad to hear from anybody interested with a view to making arrangements." Mr. Culpin should be addressed at the Offices of the Association, 3 Gray's Inn Place, W.C.

The Regent Street Quadrant.

A Committee, consisting of the Earl of Plymouth, C.B., Sir Henry Tanner, C.B., I.S.O. [*F.*], Mr. Reginald Blomfield, A.R.A., President R.I.B.A., and Mr. John Murray [*F.*], has been appointed by the Treasury to consider the design to be adopted for completing the rebuilding of the Quadrant, Regent Street.

OBITUARY.

George Tunstal Redmayne [*R.F.*].

On Saturday, 24th August, there took place at Haslemere Parish Church the funeral of George Tunstal Redmayne, whose death occurred on the morning of Wednesday the 21st, after some months of illness.

In a certain sense it might be said of him that he was one of the few true survivors of the Gothic revival. In so calling him it is not intended to imply that there are no present-day students and performers of good Gothic work, still less that George Redmayne was in his art a mere adherent of that Victorian school whose mannerisms were often faults. Rather might it be said of him that he was among the few who, trained under the rules of the Gothic revival, lived on into the present century without changing the source of his vitality. His work, it is true, was full of original vigour, but it was all based upon the mediæval foundation; and I am not aware that he ever made any approach to Classic, or even to definitely Renaissance studies.

Redmayne was born at Highgate on the 27th December 1840. His father, Giles Redmayne, came, I believe, of a Yorkshire family, and settled in London on purchasing a well-known silk business which still bears the name. His mother's maiden name was Margaretta Roby. George Redmayne was the youngest of the family, and it was after his birth that his father purchased and resided at Brathay Hall, Ambleside.

After education at Tonbridge School, Redmayne was articled to the late Alfred Waterhouse, R.A., whose practice was at that time in Manchester. The connection became more than a professional one, for in 1870 he married Waterhouse's sister Katherine, who died several years ago. Redmayne always practised in Manchester (residing chiefly at Alderley Edge), except that after transferring his residence to Haslemere in 1894 he continued to conduct a voluntarily restricted practice from his new home. He was never greedy for multiplicity or magnitude of work. His personal thought and personal labour entered every detail of his designs, and he was exceptionally careful in making sure that nothing should appear in his work which was meaningless or nugatory. His comparatively small list of executed works is, therefore, not by any means to be attributed solely to lack of opportunity.

Among the buildings in which he best satisfied his own intentions were: The Scottish Widows Office, Albert Square, some business premises at No. 20 Cross Street (recently altered), the School of Art, and the Racquet Courts, all in Manchester. His two best country houses were Whitton in Herefordshire for Mr. Richard Green, and Feldemore in Surrey which he built *à deux reprises* for his brother-in-law, Mr. Edwin Waterhouse. His best church, St. Chrysostom's, Victoria Park, Manchester, was unfortunately destroyed by fire. Other of his buildings were a house at Mayfield in Staffordshire for Mr. Joseph Simpson; the Dalton Hall, Manchester, for the Society of Friends; Schools at Knutsford and Broadbottom, and various small works at Ambleside and Alderley. Many of these buildings show that he was capable of carrying out work on an important scale; the Scottish Widows Building in particular is as good a proof as one could have that there was real art and real sense in that mediæval revival which is to-day so readily despised. It is virile and fresh.

But Redmayne's heart went out into the little things. In designing a tombstone—and there are many of his in the Brathay Churchyard—he composed a memorial ode. He would compress into these few feet of stone the personal tribute that a poet would weave into the fourteen lines of a sonnet.

At Haslemere he erected at his own cost (1901) a churchyard cross in commemoration of the nameless dead, and there are many who could tell of the generous gift of his talents when for a church or for a friend he offered with brain and pencil the tribute of some tender and thoughtful design.

Redmayne was one of those who submitted themselves successfully to the Voluntary Examination of the Institute which preceded the establishment of the obligatory test. He became an Associate in 1872 and a Fellow in 1877, and was placed on the list of Retired Fellows in 1902.

I suppose that not many of our living London members knew him personally, but all who did will understand why I cannot end without a word on that gift of humour which was so evident a feature of his personality. With pen, with tongue he was unfailingly ready. His letters were often masterpieces of dry mirth overflowing with untainted merriment, and even his Presidential Address delivered in 1886 to the Manchester Society of Architects shows beneath its official soberness the gaiety of infectious wit.

Among the stories which cling in the memory of his Manchester friends one is specially and delightfully characteristic. He had been asked by his Vicar for a donation to a special object. For once, to the priest's surprise, the answer from this generous giver and good Churchman was "No," and Redmayne added the unexpected words "You must not expect me to assist you in an attempt to deceive the Almighty." The special object (can you guess it ?) was a set of tubular "bells."

Redmayne is survived by his two sons, Mr. Martin Redmayne and Mr. Leonard Redmayne. A good crayon portrait of him by the late G. F. Watts, R.A., is the outcome of a friendship between neighbours and the evidence of an artistic sympathy.

PAUL WATERHOUSE [*F.*].

Henry Hall.

Henry Hall [*Associate* 1872, *Fellow* 1887], whose death, after a long illness consequent on an operation, occurred on the 2nd inst., was born in 1849. My acquaintance with him began at Tonbridge School. All through life he was very short-sighted, and as a boy this prevented him from taking part in most games: in consequence the time during which he otherwise would have been playing cricket and football was mostly spent in the carpenter's shop. He became quite a skilful joiner, and the training was of great value to him in the work of his life.

Hall was articled to the late Edward I'Anson, and while serving his articles he attended the evening classes of the Royal Academy. Here he came under the influence of Mr. Phené Spiers, to whose training he always felt and expressed a high sense of gratitude.

In 1883 Hall and I competed for the Miller Memorial Hospital, Greenwich, and were successful, and from this time we worked more or less together until, about the year 1896, we entered into partnership, which lasted until at the end of last year his health compelled his retirement and our long connection was severed.

During the years of our partnership we carried through many works, mostly in connection with hospitals, though we had a fair amount of other work. As an architect Hall's forte lay in planning, but more especially in devising intricate alterations, at which he was very facile.

KEITH D. YOUNG [*F.*].

John Thomas Bressey [*Fellow*, elected 1877] passed away on the 28th August in his sixty-ninth year. Mr. Bressey served his articles with the late Henry Jarvis, of Trinity Square, Borough, was for a short time in the office of Professor Kerr, and commenced independent practice about the year 1867. His buildings included National Schools at Chingford, many private houses in the neighbourhood of Wanstead and Walthamstow, model cottages, shops and warehouses in Whitechapel, a large farmhouse in Devonshire, a Wesleyan chapel at Wanstead, large brewery premises at Stratford, &c., Holy Trinity Church, Leytonstone, and the Council Offices at Wanstead. He was a member, and for two years master, of the Coopers' Company, and for forty-five years was consecutively surveyor and consulting surveyor to the Wanstead Local Board and its successor the Urban District Council.

George Friend, of 44 Earl Street, Maidstone, who died on the 21st August in his ninety-second year, had been a Fellow of the Institute since 1888. Mr. Friend served a pupilage of six years with Mr. Clarke, of Framlingham and Ipswich, and afterwards was assistant to the late R. W. Phipson, and later clerk of works to Mr. Frederic Chancellor, of Chelmsford and London. He commenced practice in Maidstone in 1853. He was the architect of the Rochester and County Club, and of several country houses, brewery buildings, farmsteads, cottages, warehouses, &c., in Kent and adjoining counties. He was at one time Surveyor to the Dean and Chapter of Rochester, and Surveyor to the Hastings Cottage Improvement Society. As a younger man he took a prominent part in municipal work, representing the High Street ward on the town council. His practice is being continued by Mr. Wm. H. Poole, *Licentiate*, who has been for several years in his office as assistant.

"Architects from George IV. to George V."

[JOURNAL 27th July.]

From Mr. MAURICE B. ADAMS [*F.*]—

On the information of Mr. William Grellier [*F.*], of Queen Anne's Gate, S.W., it may be mentioned in regard to the competition for the Royal Exchange (referred to on page 602) that the first premium (£300) was awarded to his father, WM. GRELLIER [1807–1852], architect of the Royal Exchange Insurance Buildings, Liverpool, and Hon. Secretary of the London Architectural Society at the time of its union with the R.I.B.A. in 1842 (p. 606). Wm. Grellier was awarded the Royal Academy Silver Medal for Architecture in 1826, and the Gold Medal in 1829. He was a frequent exhibitor at the Royal Academy, and contributed largely to the Architectural Society's Portfolio of Measured Drawings which afterwards came into the possession of the Institute. He held the office of District Surveyor for Whitechapel. Among his buildings besides that at Liverpool above mentioned are the Almshouses at Ball's Pond for the Tilers' and Bricklayers' Company, the Ethelburga Schools, and the Dry Metre Gas Works on the New North Road.

In the list at the end of my Paper I find that I have omitted the name of GEORGE PAPWORTH [1781–1855], brother of John Papworth. He visited Dublin in 1806 and was patronised by Lords Westmeath and Gormanstown, and in 1809 built Sir Patrick Dun's Hospital in a similar style to Gandon's work. Between 1818 and 1820 he altered and added to the building of the Dublin Literary Society, erecting the façade in D'Olier Street. In 1823 he designed the King's Bridge over the Liffey, near Phœnix Park, and in 1831 was elected a member of the Royal Hibernian Academy.

LIBRARY
OF THE

Angers Cathedral: Nave, looking East

[Photo. E. Lefèvre-Pontalis.

RIBA Architectural Library

ANGERS CATHEDRAL: THE VAULTS OF THE NAVE.*

By John Bilson [*F.*], F.S.A.

THE nave of Angers Cathedral is certainly one of the masterpieces of mid twelfth-century architecture. This wide aisleless nave, with its simple plan of three great bays, though producing a very different impression from the more complicated plans of the northern cathedrals, shows extraordinary grandeur of conception and boldness of construction.

Its vaults are indeed remarkable.† We may be surprised that the builders of the middle of the twelfth century should have been able to poise three vast ribbed vaults of such perfect construction over a span of more than fifty feet. Their date, however, is unusually well established, for, of Normand de Doué, who was bishop from 1149 to 1153, it is recorded that "voluturas lapideas miro effectu aedificare coepit."‡

They are among the earliest, and are certainly the most important, of the so-called "domical" vaults of the Angevin school. It is of consequence therefore to know what were the precise reasons for their particular form. Most writers on architecture see in them the influence of the domed churches of Aquitaine, of the type of which an example is afforded by the nave of Fontevrault,§ on the banks of the Loire itself. Some, more cautious than others, content themselves with saying that the form of the Angevin vaults recalls that of the dome. More frequently, however, a more or less dominant rôle is assigned to the dome in the formation of these vaults; the dome has been considered to be an essential element in their origin and development; they have even been called "ribbed domes."

In view of these different opinions, it had long seemed to me to be very desirable to have an analysis of so important an example as the nave vaults of Angers Cathedral, which would enable us to determine how far the dome had really influenced their construction. The drawings of these vaults which had hitherto been published scarcely gave sufficient information on which to base a complete analysis of their structure. I therefore made use of the opportunity afforded by the *Congrès* of Angers to take, with the obliging collaboration of M. Chauliat, the necessary measurements to make the drawing of the vault of the middle bay of the nave, which is illustrated in fig. 1.‖ With the assistance of this drawing, I propose

* This paper was written for the Société française d'archéologie, and has been printed, in the form of a translation by M. le Comte de Lasteyrie, in the volume of the *Congrès archéologique de France tenu à Angers*, 1910, vol. ii. pp. 203–223.

† The view of the interior of the nave here reproduced is from a photograph very kindly lent by M. Eugène Lefèvre-Pontalis, the President of the Société française d'archéologie, and Professor of Archæology at the École des Chartes.

‡ Marchegay, *Chroniques des églises d'Anjou*, p. 192. Cf. Chanoine Urseau, in the volume of the *Congrès d'Angers*, vol. i. pp. 164 and 174. Normand de Doué was bishop from 6th March 1149 to 27th April 1153.

§ For longitudinal section of the nave of Fontevrault, see the volume of the *Congrès d'Angers*, vol. i. p. 52.

‖ As it would be impossible to take complete measurements of a vault of this kind without extensive scaffolding, it may be well to state precisely what dimensions have been taken for fig. 1. The measurement of the plan was, of course a simple matter. The heights to the capitals of the pillars and to the crowns of the wall-arches were measured from the floor. The height of the key of the diagonal ribs was measured through a hole in the cell to the floor. M. Jean Hardion, architecte-en-chef des monuments historiques de Maine-et-Loire, very kindly measured for me a section along the crown of the vault, and from this the height of the crown of the transverse arch was obtained. From the plan and from these heights, the curves of the arches have been developed. I wish to express my sincere thanks to M. Chauliat and M. Hardion for their most obliging help.

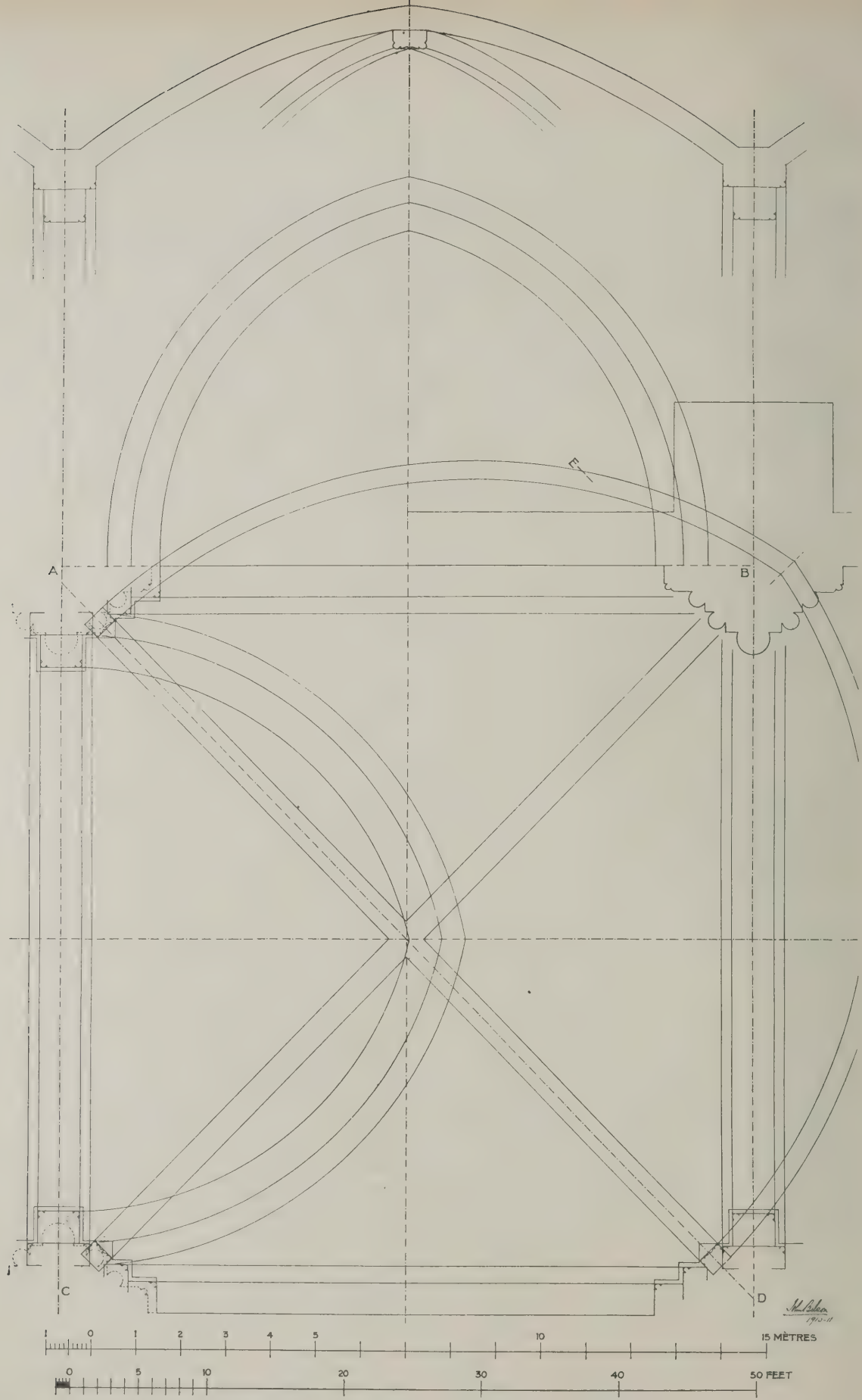


FIG. 1.—ANGERS CATHEDRAL: VAULT OF MIDDLE BAY OF NAVE.

to attempt an analysis of the construction, especially as regards the question of the influence of the dome.*

To commence with the plan and general scheme of the nave. We know that the earlier nave and aisles were transformed by the builders of the twelfth century into a nave of a single span.† The width of the existing nave was therefore fixed by the width of the nave and aisles of the preceding church. The width of the middle bay, from centre to centre of the pillars, is 50 feet 8 inches. This is almost exactly the width of the nave between the piers which receive the wall-arches.‡ It is evident therefore that this was the square which was the basis of the setting-out of the nave.§

The pillars are composed, towards the interior, of five shafts—a larger one in the middle engaged on the face of a pilaster, flanked by two on each side engaged in the re-entering angles of the pillar.‖ The middle shaft receives the transverse arch of the vault; the next shaft on each side receives the diagonal rib; and the other receives the outer order of the wall-arch. Alone no independent support is provided for the outer order of the transverse arch. Beyond the shafts, the face of the wall is recessed under a great pointed relieving arch, below the wall-gallery which runs in front of the windows and through the pillars. Above this gallery, a pier, the face of which continues the face of the wall below, receives the inner order of the wall-arch. The nave is lighted by two windows with semicircular arches, above the wall-gallery, in each bay.

It must be remarked that the general type of plan, and much of the general scheme, of this nave is derived from the domed churches of Aquitaine. The nave of Angoulême Cathedral and the nave of the abbey church of Fontevrault may be taken as typical examples. We see the same plan of a wide unaisled nave, divided into great square bays. In the internal elevation, too, there is much resemblance. In place of the wall-arcade beneath the gallery at Angoulême and Fontevrault, we find at Angers a single great relieving arch. Above, the idea is the same—a wall-gallery below two windows in each bay. In the structural organisation we see the same concentration of the masonry of the wall into the pillars and buttresses at the points of abutment to counteract the thrusts of the vault, and the same tendency to reduce the wall between the abutments to a mere screen, which are essential characteristics of the architecture which we call Gothic. However, whereas at Angoulême and Fontevrault the pillars are for the most part internal, and the buttresses form only slight projections externally, at Angers the projection of the pillars internally is very much less, and they are reinforced by external buttresses of great width and projection.¶ Consequently the wall-arches have considerably less depth. At Angers, however, the form of the pillars themselves is essentially different. Instead of the great square masses of masonry with engaged half-shafts to receive the transverse arches, wall-arches, and pendentives of the domed churches, we find at Angers pillars which are organised into a group of shafts, each of which is designed to receive its own member of the vault. In fact the plan of these pillars proves that the ribbed vault was provided for from the first, and, except that the outer order of the transverse arch has no independent support, the pillars were arranged with perfect science and logic.

The vaults are true ribbed vaults. Their membering, which is completely organised,

* All the following observations apply to the vault of the middle bay of the nave.

† L. de Farcy, *Les fouilles de la cathédrale d'Angers*, in the *Bulletin Monumental*, lxvi. 488.

‡ The clear width of the nave between the principal shafts of the pillars is 41 feet 6 inches. The extreme internal width between the walls above the galleries is 54 feet 6 inches.

§ In consequence of the width of the transverse arch, the vault itself, within the transverse arches and wall-arches, is not exactly square, but measures about 16 inches more from north to south than from east to west.

‖ Fig. 1 shows the plan at the springing of the vault, with the plan of the pillar indicated by dotted lines. For greater clearness, however, the plan at D shows the plan of the springing only, and the plan at B shows the plan of the pillar only, with the wall and buttress.

¶ See fig. 1, at B.

consists of transverse arches and wall-arches, each of two orders, and of diagonal ribs of a single order. All these arches are pointed.*

The intrados of the inner order of the wall-arch forms almost exactly an *arc en tiers-point*, properly so-called; that is, the centres are placed at points which divide the span approximately into three equal parts.†

The intrados of the inner order of the transverse arch is a little more obtuse than the *arc en tiers-point*. As the span of the transverse arches is greater than that of the wall-arches, the crowns of the former rise to a slightly higher level than those of the latter.

The diagonal ribs are pointed still more obtusely; the distance between the centres of the curves is less than a quarter of the span of the intrados.‡

As a consequence of these forms, the crown of the extrados of the diagonal rib (the soffit of the cell) is about 11 feet above the crown of the wall-arch, and about 10 feet above the crown of the transverse arch.§

Each order of the transverse arches and of the wall-arches is moulded with a roll on the angle. The diagonal ribs are carved with a series of four-petalled flowers on the soffit, between a roll on each angle. The chamfer on one side of each of these rolls is ornamented with little semicircular scallops. All the rolls are stopped square a little above the abaci of the capitals (see fig. 2).

It should be noted that the pointed transverse and wall-arches have keystones, not a vertical joint at the apex.

The cells are carried on the backs of the diagonal ribs, which are not rebated to receive them.‖ The abaci of the capitals from which these ribs spring are set square, not diagonally in the direction of the rib.

The cells of the vault are regularly worked and coursed. Their thickness (measured near the crown) is 1 foot 8 inches, and the average width of the courses is $9\frac{1}{2}$ inches, measured on the extrados, where the thickness of the joints shows as $1\frac{1}{2}$ to 2 inches. At the ridge of the cells, there is not a vertical joint, but a course of keystones, the width of which measures about $12\frac{1}{2}$ inches on the extrados. The courses of the cells intersect over the backs of the diagonal ribs, more or less in herring-bone fashion.

The cells are concave in both directions, i.e. the courses are arched from the diagonal rib to the transverse arch and to the wall-arch. This concavity at the longitudinal ridge of the vault is shown by the section at the top of fig. 1.¶ Measured normally to the curve, the concavity of the intersection of the cells at the ridge gives a height of 1 foot 6 inches on a chord of about 24 feet.**

The cells are built with the joints of their courses parallel with the ridges, except as to

* In fig. 1, the dotted centre lines AC and AD on the plan represent the springing lines on which the curves of the transverse arch and the diagonal rib are set up. The dotted line AB represents the springing line for the curve of the wall-arch, and for the longitudinal section of the crown of the vault.

† The considerable thrust along the walls of a vault of this kind necessitated powerful wall-arches.

‡ The height from the floor to the tops of the abaci of the capitals is 41 feet $4\frac{1}{2}$ inches. The height from the floor to the crown of the extrados of the diagonal ribs (soffit of cell) is 81 feet.

§ These measurements are deduced from my drawing, and are as nearly accurate as I have been able to make them, without more precise measurement which would only be possible from scaffolding.

‖ The statement to the contrary in E. Corroyer, *L'Architecture gothique*, p. 25 and fig. 8, A (p. 22 of the English translation) is quite erroneous. It is remarkable that this mediocre book should be one of the few French works on architecture which have been translated into English, and it is perhaps still more remarkable that it figures among the books which the R.I.B.A. recommends to students.

¶ From the measurements which M. Hardion kindly took for me.

** Architects have frequently drawn the section at the crown of such vaults as if the ridge line was a continuous segment of a circle, from the crown of one transverse arch over the crown of the diagonal rib to the crown of the other transverse arch, and the vaults of the nave of Angers are so drawn in the sections in E. Corroyer (*L'Architecture gothique*), and in Dehio and von Bezold (*Die Kirchliche Baukunst des Abendlandes*, pls. 107, 108). It will be seen from the section on fig. 1 that the ridge line (which is merely the result of the intersection of the cells) is really pointed at the apex. The sections in Dehio and von Bezold are much more correct than those in Corroyer, though in both the masonry courses are shown much larger than they actually are.

Photo. Mon. Hist.]

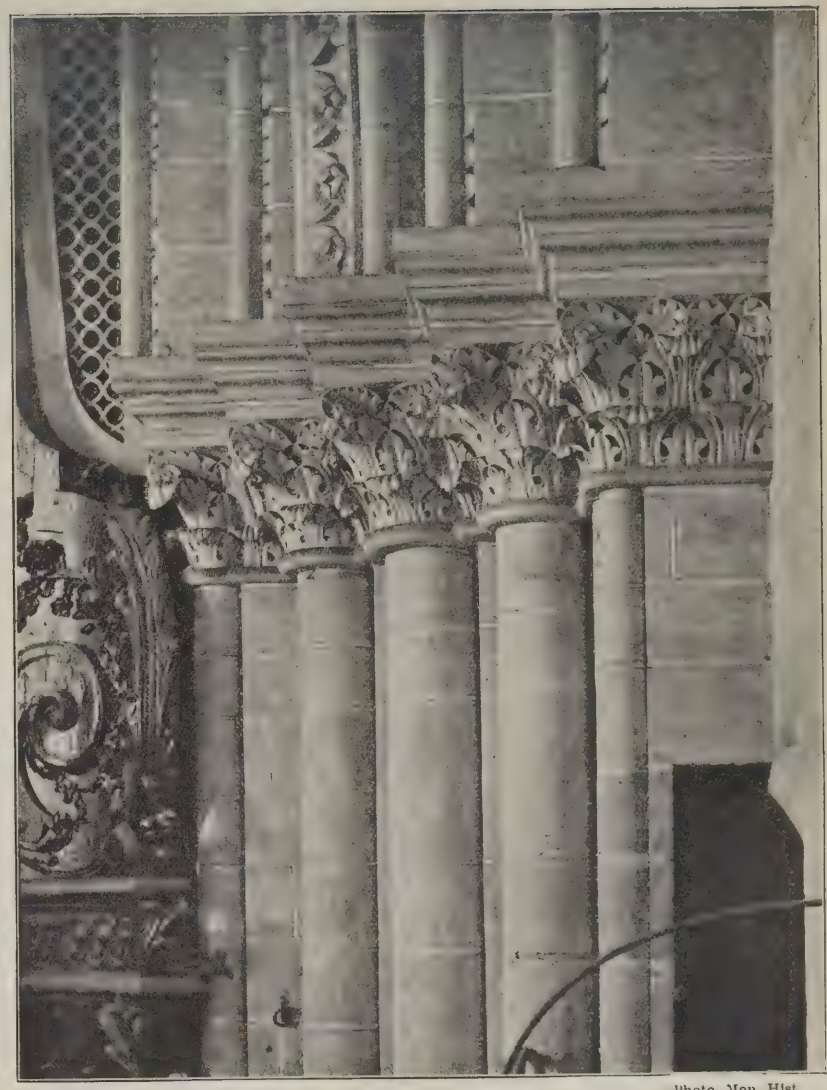


Photo. Mon. Hist.

FIG. 2.—ANGERS CATHEDRAL: CAPITALS OF NAVE VAULTING SHAFTS.

their lower parts towards the springing. Here the direction of the lower joints seems to be more nearly perpendicular to the centre line of the cell, but the succeeding joints incline gradually and quickly upwards towards the diagonal rib, so that they soon become parallel to the ridge.*

Such are the vaults. If we climb up to the roof, and see them from their upper side, with their immense cells rising some ten feet above the crowns of the transverse arches, we are scarcely surprised that such vaults have been called "*coupoliformes*," "domical." However, it will be well to examine more closely the question of precisely what traces of the influence of the dome these vaults do really exhibit.

Let us begin with the arch-curves, which really determine the form of the vault.

The development of these so-called "domical" vaults has been traced from the *coupole à pendentifs non distincts*,† such as those over the crossings of Saint-Martin, Angers, and Fontevrault, through the ribbed vault such as that of the first floor of the Tour Saint-Aubin, Angers,‡ where the vault has the form of a dome and the cells have the *appareil* of a dome, to

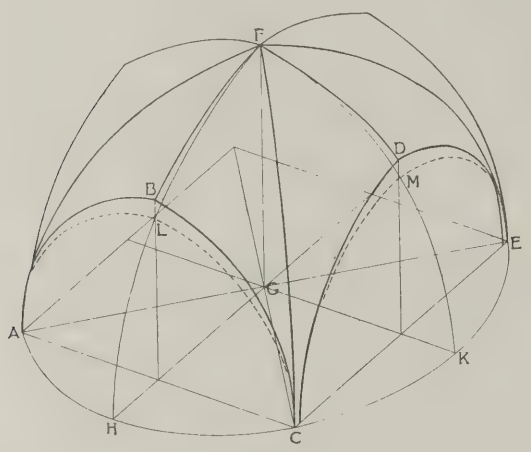


FIG. 3.

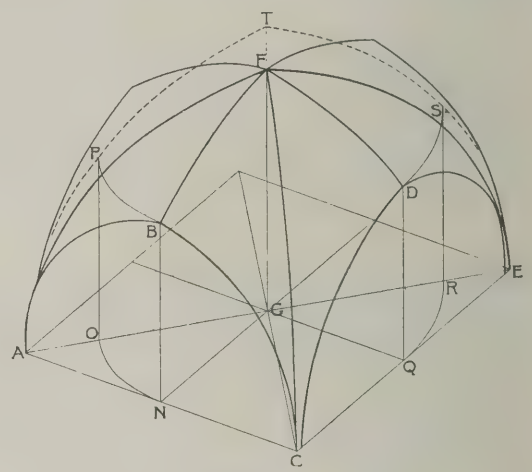


FIG. 4.

the *bombé* ribbed vaults, such as those of the nave of Angers Cathedral. The suggestion is that the builders of these latter deliberately adopted this *bombé* form in imitation of the dome. Let us see how far this is true.

Fig. 3 is a diagram of the vault in which the curves of the arches and the lines of the ridges are represented by strong single lines; AFE and CF being the diagonal ribs, ABC the transverse arch, and CDE the wall-arch. If the builder had intended to give the vault the form of a dome, we may imagine that, having first determined the pointed arch form of the diagonal rib, he might have fixed the heights of the transverse arch and wall-arch by a revolution of the curve of the diagonal rib on its vertical axis. Suppose a revolution of AF on its vertical axis FG, the curve of this revolution HF would intersect the plane of the transverse arch at L, and the revolution FK would intersect the plane of the wall-arch at M; and these

* This is also to be seen in the cells of other vaults of this school, as for example those of the naves of the cathedral and La Couture at Le Mans.

† Dome generated by a semicircle on the diagonal of the square, for which we do not seem to have any short name in English. I have also retained the French terms *appareil* and *bombé* as more precise than any corresponding English terms (using *bombé* as describing vaults in which the crowns of the diagonal ribs are at a higher level than those of the other arches of the vault). The use of "domical" for *bombé* is misleading when it is applied to vaults the construction of which has nothing in common with the dome.

‡ For an analysis of the structure of this vault, see C. H. Besnard, *La coupole nervée de la Tour Saint-Aubin d'Angers*, in the volume of the *Congrès d'Angers*, vol. ii, p. 196.

two points L and M might have been taken as determining the heights of the two arches in question. It is necessary to observe that the curve produced by the intersection of the plane of the transverse arch ABC, and of the plane of the wall-arch CDE, with the surface generated by the revolution of the diagonal rib AF, would be neither a pointed arch nor a segment of a circle, but an ovoid curve. If, however, we substitute for this ovoid curve a pointed arch of the height fixed as suggested above, struck from centres on the springing line, we should obtain the curves indicated by the dotted lines ALC, CME, instead of the actual curves ABC, CDE. In other words, if this method had been adopted, the points of the transverse arch and wall-arch would have been some 3 feet lower than they actually are.

If we imagine that the builder employed the inverse method, and developed the height of the diagonal rib from those of the transverse arch and the wall-arch, fig. 4 shows what might have been the result. From a centre on the vertical axis FG, describe a circle BP (NO on plan) from the apex of the transverse arch B; and, from the same centre, describe a circle DS (QR on plan) from the apex of the wall-arch D. The curves of the diagonal rib, described from centres on the springing line AGE through the points P and S, would be indicated by the dotted lines APTSE, instead of the actual curves AFE.* In other words, if this method had been adopted, the apex of the diagonal rib would have been some 7 feet higher than it actually is.

It is evident, therefore, that the curves of the arches were not precisely determined by the form of the dome.

What the builder really did was apparently something much more simple. For the transverse arch and wall-arch, he adopted the *arc en tiers-point*, or something near it. He might have made the diagonal rib semicircular, in which case the vault would still have been *bombé*†; but a semicircular diagonal rib of the immense span of 63 feet would have involved serious risk of settlement at the crown. He must have been well aware of the advantages of the pointed arch, for the use of which he had precedents in abundance. The pointed arch had been used systematically for the transverse arches and wall-arches in the domed churches of Aquitaine; it had been used in barrel vaults and groined vaults in his own country; to say nothing of many examples in other districts. He therefore adopted for the diagonal rib the pointed form, which was the strongest and most suitable for his purpose, but, in order to avoid its rising unnecessarily high above the crowns of the other arches, he gave it a form considerably more obtuse than that of his other arches. The *bombé* form of the vault was the inevitable result of the forms adopted for the arches.

While the forms of the arches may thus be accounted for by structural reasons, it is necessary to take into account the possibility of the influence of such a vault as that of the first floor of the Tour Saint-Aubin at Angers. In this vault the four cells, which have the form and *appareil* of a dome, are intersected by the diagonal ribs, which are interrupted at their crown by a central eye.‡ These diagonal ribs, if produced through the eye, would have (if I am not mistaken) a slightly pointed form. The revolution of a curve of this form on its central axis would give a curve of intersection, with the side walls, of ovoid form, for which were substituted, in the actual work, pointed wall-arches, which must have involved some slight departure from the true domical form for the cells. Considering only the curves of the arches, they show a marked similarity of system to those of the nave vaults of the cathedral, and it is more than probable that the builder of the latter, in designing the curves

* In fig. 4, the curve of the diagonal rib is not obtained by a revolution of the *curve* of the transverse arch, for in that case the former would not be an arc of a circle. The two points P and S being fixed as suggested above, the dotted lines represent arcs of circles drawn through these points from centres on the springing line. This diagram is simply given as an illustration of a possible method, though I do not suggest it as probable.

† If the diagonal rib had been semicircular, its crown would have been about 3 feet 4 inches above that of the transverse arch, and about 4 feet 4 inches above that of the wall-arch, instead of these dimensions being, as actually, about 10 feet and 11 feet respectively.

‡ See L. de Farcy, *La Tour Saint-Aubin à Angers*, in the *Bulletin Monumental*, lxx. (1906), p. 558.

of his arches, was following to a great extent what had already been done at Saint-Aubin, although the vaults differ radically in point of structure. To this extent, therefore, it seems to me to be true to say that the vaults of the nave of the cathedral show the influence of the dome, or rather of a type of vault which itself retained much of the form and structure of the dome.

To turn now to the form and structure of the cells of the vault. We have seen that the forms of the arches were not such as to give to the whole vault the form of a dome. This is confirmed by an examination of the form of the cells. Fig. 5 is a quarter-plan of the vault, on which ABC represents a horizontal section at the height E on fig. 1. If the vault really had the form of a dome, this horizontal section would be a circle; it is actually an irregular octagon with curved sides. The line where the courses of the cells intersect over the back of the diagonal rib is marked by a distinct angle on the extrados at B, as can be clearly seen from the upper side of the vault.

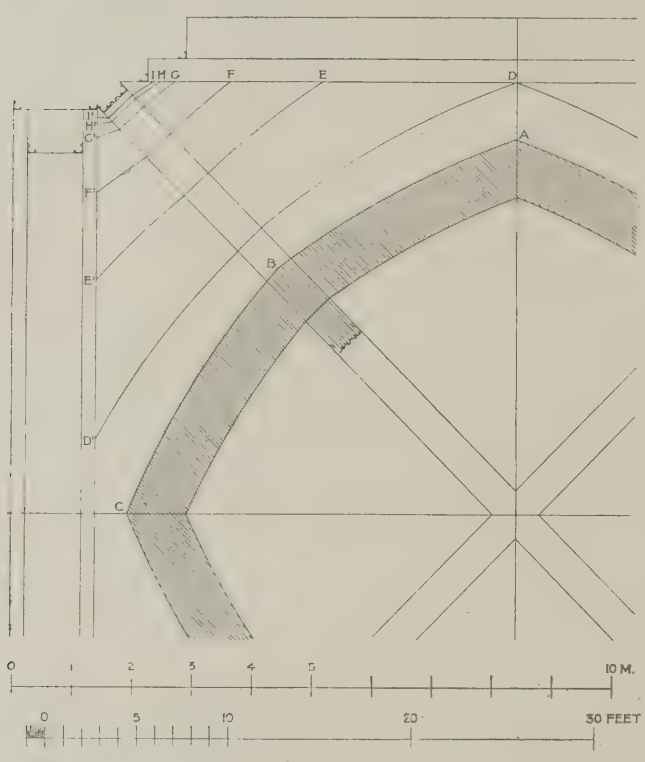


Fig. 5.

In support of the idea that the vault retains much of the structure of the dome, it has been urged that the cells towards their springing do not form a groin, but are inflected, as they would be if the vault were "domical." This is not exactly true, as will be seen from fig. 5, where DD′, EE′, FF′, GG′, HH′, and II′ represent horizontal sections* of the intrados of the cells at various levels. The direction of the cell at I′, H′, G′, and F′ is such as would form a groin, though this is not the case on the opposite side of the diagonal rib at I, H, G, and F. But this simply results from the relative positions of the arches at their springing and from their curves, and has nothing to do with the characteristics of dome construction.

However, it is not in the least degree probable that the builder concerned himself at all with the horizontal section of the cells, for he built them, not with the horizontal concentric courses of a dome, but in courses parallel with the ridge,† with the *appareil* of a groined vault.

It should be noted, too, that each single cell is not in itself a portion of a sphere. If we develop a sphere from the two arched sides which bound the cell, we shall find that the curve of the ridge-line is too flat (*i.e.* is of too great a radius) to coincide with the surface of such a sphere. In reality the surface of the cell was developed by lines drawn from transverse arch to diagonal rib, and from wall-arch to diagonal rib, following the direction of the joints of the courses, and by giving to the courses the determined degree of concavity. The result is a surface which is incapable of exact geometrical definition.

Was the idea of arching the cells derived from dome construction? It is possible, though

* Not the joints of the courses.

† Except immediately above the springing, as before described.

it scarcely seems to me to be probable. Viollet-le-Duc, who certainly cannot be accused of underestimating the influence of the dome, says—"Puisque les constructeurs du XII^e siècle détachaient les nerfs de la voûte, qu'ils en faisaient comme un cintrage permanent, il était naturel de *voûter* les remplissages sur ces nerfs, c'est-à-dire de leur donner en tout sens une courbure qui reportât réellement leur pesanteur sur les arcs."* We find, indeed, in other districts that very soon after the builders began to construct the cells of their vaults in courses of worked stone,† they introduced the improvement of arching the cells, quite naturally as Viollet-le-Duc said, and this in vaults in which it is very improbable that the dome had any influence whatever.

There remains the method of jointing the cells. Viollet-le-Duc‡ and Choisy§ describe the method of the Gothic builders (Viollet-le-Duc says, "la méthode des premiers constructeurs gothiques") as obtaining the direction of the joints by a division of the two sides of the triangle into an equal number of parts. Choisy‖ speaks of this as the method of the Ile-de-France, which "donne des fuseaux où la largeur de douelle varie d'une extremité à l'autre." With this he contrasts the method of the Angevin builders, who "dominés par les traditions de la coupole, donnent aux fuseaux de leurs voûtes une largeur de douelle uniforme." The cells of the nave vaults of Angers Cathedral are indeed jointed in this manner, but is it necessary to see in this any connection with the traditions of domical construction? Whether this method was derived from the dome, or from the groined vault, it is only to be expected that the builders of the early ribbed vaults would adopt the simplest method of building their cells in parallel courses as far as practicable. In the earlier *bombé* ribbed vaults of the Ile-de-France, I believe that it is common to find that the courses of the upper parts of the cells are parallel with the ridge, although the precise fashion in which the transition is managed between these and the different directions of the lower courses varies in different examples. Even in Angers itself, we find a precedent for the parallel jointing of worked courses in the groined vaults of the lower story of the Evêché. It seems to me, therefore, that there is no reason to attribute this method to the influence of domical construction rather than to that of the groined vault.

From the considerations discussed above, it seems to me to follow that the nave vaults of Angers Cathedral are true ribbed vaults, which have neither the form, nor the structure, nor the *appareil* of the dome. The difference between the vaults and the dome is so great that the practice of domical construction could never have led to the conception of such vaults as those of this nave. At the same time, it seems to be certain that the system of arch curves, which gives to these vaults their characteristic *bombé* form, is related to that of such dome-shaped vaults as that of Saint-Aubin, and that to this extent it is true to say that they retain something of the influence of the dome in their general form, though not in their construction.

If these conclusions be true, it almost necessarily follows that they will be equally true of the other early ribbed vaults—the so-called "domical" vaults—of the Angevin and neighbouring schools. It may be suggested, indeed, that the *bombé* form which is characteristic of many of the early ribbed vaults of the Ile-de-France was not a form which the builders consciously aimed at as desirable in itself, but was rather the natural result of the forms of arches employed for the rib-skeleton. How far this is true of the later and more complicated vaults of the Angevin school would be an interesting subject for research, which would demand an analysis of their structure and rib system, based on accurate measured drawings.

* Viollet-le-Duc, *Dictionnaire*, ix. 501.
† As contrasted with rubble courses, plastered on the soffit.
‡ Viollet-le-Duc, *Dictionnaire*, iv. 103.
§ A. Choisy, *Histoire de l'architecture*, ii. 271.
‖ *Ibid.* ii. 276.

If it be true that the nave vaults of Angers Cathedral show so little of the influence of the dome, it is unnecessary to go to the other extreme, and explain them simply as an importation from the Ile-de-France, of which there is no proof either historical or architectural.* We have seen that the actual vaults were provided for from the very beginning of the nave, and, as Herr Dehio pointed out sixteen years since, the vast dimensions of the building necessitate the date of its commencement being put back at least eight or ten years anterior to the recorded date of the construction of the vaults themselves. It is just possible, therefore, that the constructors of this nave might have known the narthex and choir of Saint-Denis, but there is nothing to indicate that Saint-Denis had any more influence on Angers than it had on the similar vaults of the nave of Le Mans Cathedral, which nave is attributed to 1142-1158. These vaults do indeed show some characteristics analogous to those of the Ile-de-France, but it does not necessarily follow that the one was an importation from the other.

This is not the place to discuss the controversial question of the relative dates of the earliest ribbed vaults; and indeed of the precise course of the development which led up to Saint-Denis and the nave of Angers we still know but little—naturally, perhaps, in view of the fact that the great majority of the earlier attempts must have disappeared. Of the pre-eminence of the school of the Ile-de-France from Saint-Denis onward, there can be no dispute. As, however, there has been a tendency to attribute to this school far too important a part in the earlier stages of the development, it is perhaps well to remember that Saint-Denis is the earliest example of the ribbed vault in the Ile-de-France of which the date can be proved with certainty by documentary evidence. It is well to remember, too, that some of the more important examples which are undoubtedly earlier, such as the vaults of the eastern bays of the south aisle of the nave of Saint-Etienne, Beauvais, and those of the ambulatory of Morienval, indicate by their methods of construction and system of rib-curves that they themselves do not represent the very earliest attempts in this direction, and that they are indeed less rudimentary than some examples which are to be found in other districts. During the first half of the twelfth century, the Angevin builders were experimenting with various kinds of vaults, but it is not clear precisely how they reached the stage represented by the vaults of this nave. Influence from the Ile-de-France is possible; influence from other neighbouring provinces is also possible; and the skill of the Angevin builders in vault construction must have counted for much. For what, I think, is certain is that nothing more perfect and scientific, within their limitations, had hitherto been built than the vaults of this nave. From them the development proceeded on very individual lines, and produced a school of vaults differing in marked fashion from those of other schools.

The study of the vaults of the nave of Angers Cathedral suggests a reason for testing the truth of a current theory on the origin of the ridge rib. In certain groups of vaults, the direction of the courses of the cells towards their crowns is not parallel with the ridge, where on the contrary the joints meet obliquely.† The theory in question suggests that the ridge rib was introduced in order to mask the oblique intersection of the courses of the cells at the ridge, and that it was, in origin, simply a cover-joint.

The Angevin school admittedly used the ridge rib from a very early date. However, in

* See the judicious observations on this subject by Herr G. Dehio in his *Die Anfänge des gothischen Baustils*, in the *Repertorium für Kunstwissenschaft*, xix. (1896)—of which a short summary was given in the R.I.B.A. JOURNAL, VI. (3rd series), 267.

† This is frequently called the "English" method, and it is certainly very common in England during and after the thirteenth century. In the second half of the twelfth century, however, joints parallel with the ridge are, I believe, more usual in the English vaults, and they are not uncommon in the thirteenth century. It is curious, too, that the earliest rudimentary example which I have seen of the so-called "English" method is to be found in the Ile-de-France, in the vault of the straight bay of the choir of Morienval (see illustration in *The Builder* of 16th July 1910, p. 77).

the simple quadripartite vaults of this school which immediately preceded the vaults with ridge ribs, the direction of the joints of the cells towards the crown is always parallel with the ridge (so far as my own observation extends); it is so, for example, in the vaults of the nave of Angers Cathedral, of the nave of Le Mans Cathedral, and of the choir of Saint-Pierre, Saumur. So also, when they began to add the ridge rib to simple vaults of this kind, the direction of the joints of the cells is parallel to the ridge rib, as in the vaults of the transept of Angers Cathedral, of the choir of Saint-Martin, Angers, and of the nave of La Couture, Le Mans. As there was here no obliquity in the joints of the cells to be masked at the ridge, these vaults certainly do not support the cover-joint theory of the origin of the ridge rib, to which I have referred.

The same thing is to be observed outside the Angevin school. In such rudimentary applications of the ridge rib as are found in the western bay of the nave of Airaines (Somme),* and in the aisle of the north transept of Ripon Cathedral,† the joints of the cells are parallel with the ridge rib. It is remarkable, too, that in the vaults with ridge ribs at Lincoln Cathedral, which are among the earliest examples of the systematic use of the ridge rib in England, all the cells are jointed parallel with the ridge rib.‡

In Angers itself, the choir of Saint-Martin suggests an explanation of what may well have been the true origin of the ridge rib. The vault of the western bay has a ridge rib on which the ridge of the cell does not rest directly, but, as the ridge rib has a lesser radius than the curve of the ridge of the cell, there is a narrow spandrel of wall between the back of the rib and the soffit of the cell.§ In the eastern bay the cell lies directly upon the ridge rib, in the normal manner.

It seems to me, therefore, that the real origin of the ridge rib was structural, and that it was introduced with the idea of stiffening the rib-skeleton of the vault.

* C. Enlart, *Monuments religieux de l'architecture romane et de transition dans la région picarde*, p. 52, and fig. 35; *Manuel d'archéologie française*, i. p. 38, fig. 19.

† Last quarter of the twelfth century.

‡ The same thing is true of the vault (with ridge ribs) of the vestibule of the chapter-house of Furness Abbey (middle of thirteenth century). However, in the choir vaults of Ely cathedral (dedicated in 1251), the joints of the cells cut the ridge ribs obliquely.

§ It may be suggested that there is a possible connection of idea, by way of the nave vaults of La Trinité, Angers between this vault and the quasi-sexpartite vaults of the Norman school in which the intermediate transverse rib carries, not cells, but a wall. The structural motive seems to be the same.

ARCHITECTURAL CRITICISM.

Inaugural Address at the School of Architecture, Victoria University, Manchester, 7th October 1912.

By Professor ARCH. C. DICKIE [*A.*].

My address takes the form of more or less random impressions occurring in the presentation of architectural thought. So curiously complex are the avenues along which students embark on the study of architecture that it is with some misgivings I make the attempt to draw out of them some kind of understanding. At first sight, this point of view would appear to be overstrained. On more intimate relationship, however, with the student and his prejudices, his logical support of certain accepted canons, and his altogether illogical and wholesale condemnation of vast tracts of architectural fertility, his bigotry is revealed. Be the starting point ever so sane, he, being human, as becomes his studentship in the highest degree, must wander through the forest to the open light as best he can. Let this starting point be at the hut of simple housement, four square to the elements, built in accord with the obvious suitability of the materials at hand: a sense of the needful in building is presented which it is well for him never to forget. The architecture of his stirred imagination is a growth which has no definite form, but which flowers in proportion to the volume and quality of his building sense—that much and no more. It yields as yet nothing, but it begets a kind of architectural vagrancy, an impelling inner desire to become acquainted with the monumental evidence of history. The forest through which he wanders is the aggregation of styles and phases of styles which crowd around him, and which, at first, bring enlightenment through the very unsettlement of his mind. If he be searching with sympathy, some new beauty is constantly appearing in his path, and off he is switched, whole-heartedly, to his new love. Just as before, we found him happily confined within the compound of classic severity, so do we later find him revelling in the glorious freedom of Mediæval emancipation. This point in his wanderings he has reached by devious paths, in spite of himself, by gathering where before he disdained even to look. Having so opened his heart, he can now look back over the area of the ages and say, Truly the works of man are great, but surely the greatest of all are these monuments for the housement of God and man.

To have reached this point is promise of well-being. Between the two extremes of style there are stopping points beyond which many have not sought to venture. A choice is made which is the best, and gives the greatest joy. In short, it becomes the adopted style or phase of style. The eye and the mind have snapped together and are closed to the beauties of all others, which henceforth rank in their minds as minor efforts. There are others who have not even cared to inquire, but who have made an early choice. Having so declared themselves they are in no temper to alter.

Looked at as a business proceeding, this latter has much to recommend it. No time has been lost, and practice in the chosen style is a matter of expediency, since it has been chosen because of its popularity. No emotions have been wasted, but what a world has been missed! In defence, it is argued with truth, that the old masters had no concern for anything but their own style. In reply, it can be argued with equal truth that these old masters lived and practised an architectural life which was theirs and theirs alone. Their blind enthusiasm for a new creation was far removed from the gathering together of borrowed forms, however skilfully rearranged.

It has been given to some men the title to raise these bygone forms to life again, and to instil the real spirit of their origin. Such men are few, and all honour to them. The result has justified the method, whatever it may have been. It would be surprising, however, if such greatness were achieved by any other course than that of close intimacy with the outward forms of the style, and closer intimacy with the spirit of the social and religious life of its period. Although termed "revival," these works were so spontaneous that they may be classed with the best of a greater past.

It is the fashion, nowadays, to delight in originality, and among students there is a growing passion to appear in their so-called originality before they have looked into the heart of things. Like the former instance, they have made an early choice, but, unlike it, they have chosen from a by-path. Certain practising architects of the present day have produced a distinct and highly meritorious individuality. *It* is original, but the student's copy of it is not. It will be well for him to remember that whatever talents he may be blessed with, will be developed far more perfectly, by a study of the mature work of old masters, which he so readily despises as the effort of a worn-out past.

In discussion, it is a difficult matter to make headway with the man who supports his argument by the statement that this or that phase of style is not to his liking. A certain building bears no ornament, its severity is its charm. Another building is richly ornamented, and on that account is condemned. The basis of criticism becomes a question of plain *versus* enriched surfaces, and the prejudice against one or the other obliterates the main point at issue. How often has one heard some such criticism as "I like Gothic, but I cannot abide any other style," or such a ridiculously thoughtless remark as "English Renaissance for England." One has also heard that Byzantine is exotic, and unsuitable to this country, in spite of the fact that it is a style so logical in construction and so adaptable to

modern needs that it must appeal to all the world wherever men have learned the elementary art of building one stone upon another. What we owe to exotic architecture in the past should not easily be forgotten, but the curious fact remains that it is forgotten.

The deplorable condition of the public mind towards architecture is a subject frequently discussed, and it is encouraging to find in certain quarters a steadily increasing interest (especially in domestic work), which will, it is hoped, develop into more than individual movement. The process is slow, however, as indeed it must be. Knowledge of architecture is not easily attained. Although it seems comparatively easy for a layman to acquire a sound knowledge of pictorial art, constructional beauty is a thing which cannot be seen without devoting much more time to its study than is possible for the great majority. The triumph of repose and of grouping, the shapeliness of mass, the proportion and scale of parts, and the refinement of detail, are too subtle in their bearing upon each other to be grasped by any but the most serious student. The criticism of the public must always, I fear, be confined within certain indefinable limits which can only expand as the architecture with which it is surrounded increases in truth and beauty, and the public eye becomes unconsciously familiar with these qualities. The position of architecture in the world's history, the public have not realised. If enough interest could be awakened to extract acknowledgment of architecture as even an art of sorts, there is hope that, in the fullness of time, it may be recognised as the greatest of all arts. Architects frequently say we must educate the public before we can have good architecture. It would be nearer the mark to say we must have good architecture before we can educate the public. Let architects themselves first be educated into some harmony of opinion as to what is good and bad in architecture. If *they* are still so far from agreement, how can the public be expected to be any better? One has only to listen to the varied criticisms of modern buildings made by one's fellows to be convinced that the subject is approached from divers standpoints, and that conclusions are tempered by the various prejudices with which we appear to be afflicted.

Architectural prejudice is very much like the prejudices affecting every-day life. For the sake of illustration, let a subject be set. It is assumed that the plan is agreed upon and that the arrangement has been favourably judged. Look then at the elevation. Is it suitable to the uses of the building? Does it echo the plan? Are the mass and grouping of pleasing proportion and suitable to the site? If these also are admitted, it must be agreed that the main elements of greatness are there. Are they worthily supported by scale and grouping of voids and solids? Are the main details successfully applied? Have they been instilled with beauty of character? So might the inquiry be conducted. But it is in minor matters that opinions differ so greatly. Some monotony or some extravagance, some heaviness or some lightness of detail, and so the whole criticism becomes pivoted on what is comparatively unimportant. Prejudice steps in to deaden the eye. Have these details got character? might be more pertinently asked. Do they reflect, along with the other elements of the design, the individuality of the designer? Does the building live? If the answer be in the affirmative, then the work is raised in the ladder of distinction. There are façades in which no fault of detail can be found, but which are poor, sapless imitations. Although superficially the eye is satisfied, the pleasure is transient, for in this heart there is no throb. Be the former example less true to rule, it has added something to the history of its time. It is proof of the expressional calibre of its designer, who has a building soul above machine-like copyism. His work is immediately raised to a higher plane of criticism, dealing with his power to instil individuality with beauty.

But the moment we have got thus far we are assailed by the enemy, who thrust legions of atrocities before our eyes, claiming them as products of this school of thought. Sober analysis, however, will weed out these by reason of their lacking in some or all of the main qualifications required to bring them into serious consideration as works of art. Individuality may be (and very often is) there, but in total ignorance of the fundamental principles of building design, lacking in all evidence of true building sense.

Compromise is sometimes arrived at by agreeing that it is a matter of taste, whereupon we find ourselves asking, whose taste? If we are always sure that the difference is only one of taste, then there is little to trouble over.

Properly to appreciate architecture, we must have acquired a claim to intimate acquaintance with its various phases, and the changes in these phases following national and social upheavals and subsequent consolidation: the history of peace and war and its effect upon the people, the conditions of prosperity through which the arts were fostered, as well as a close personal intercourse with buildings themselves. We must seek to understand the heart of a building as we would seek a closer knowledge of our fellow men. It is not enough that the eye alone should be pleased; that, as in human relationship, is flimsy contentment and a poor insipid acquaintanceship. The actual form of face and figure, however perfect, serves to entrance only for a moment if, when you have pierced the shapely exterior, you find nothing to stimulate your interest. The features, through which there shines a sterling mind, be they shapely or no, excite fond interest in a human asset. So

with buildings. But most buildings have character of a kind. So have all men. We must leave the intellect to separate the weed from the flower. Casual observation is insufficient; closer reading begets either more or less liking. As in the human instance, certain buildings grow beautiful as the mind of the observer grows in discernment and is able to read, in the hand of the designer, the nature of his architectural sense stamped in the line and texture of his building.

Let us apply this parallel to a criticism of the buildings seen in any ordinary street. It may be that we see a cube of fat pompously enriched in swarming exuberance, sweating with abundance, and crushing its less-prosperous neighbours with the very weight of its self-esteem. We may also see a gay coquette, in make-believe prettiness, tinkling a one-fingered accompaniment to a borrowed melody, impudently seeking applause.

On the other hand, it may be that we shall see a quiet, gray, thoughtful mass, lined and pierced with such skill that we are commanded to stop and look. Looking, we wonder at the perfect balance and proportion, the well-applied enrichment, the strength and beauty, the grace and culture, and the dignified consciousness of position in the world of works. When a building has raised such emotions as these, it not only manifests the genius of its designer, but stands as an essay on the highest human qualities to him who *may* know if he will read. The class of building matters little, be it church or warehouse; its character is established. The stamp of nature has welded it to its human fellow and none can separate them. It is both interesting and instructive to apply this human parallel to the study of buildings, and I believe it to be the most helpful avenue through which some understanding can be attained of that most subtle of all qualities—character.

There are no finer lessons in scale than are illustrated by the simple harmony of parts in the work of the Greeks, as compared with the scale harmony shown in, for example, the great Church of St. Sophia, Constantinople, in which a totally different problem has been solved. In the former instance, the almost ridiculously simple and few parts of the whole associate with each other and with the minor details in perfect unity. In the latter example, the problem was made immensely more difficult by the existence of a great central domed area, resting on tiers of orders which, without the friendly aid of surface decoration, would have appeared puny and insufficient. Such a mighty canopy, reckoned from the Greek lesson, demands supports equally mighty in scale and detail. But the Byzantine builders had conceived a new sense of scale, and by clothing the surfaces, net-like, in decoration the whole is drawn together in perfect harmony. How sensitive is the scale so obtained is shown by the Koran discs which have been hung upon the pendentives by the Mohammedans. Small though they be in comparison with the mass in which they are set, they shock one's sense of harmony by reason of their overpowering scale in comparison with the detail. Their introduction has, at least, one great value to architects, in showing how easy it is to destroy the contentment borne by this form of architectural treatment and in conveying some idea of the decorative heights reached by these Eastern builders.

Faults in scale, occurring in Mediæval work, do not cry out with the same discontent, and one becomes so absorbed in mystery that such defects, if they are defects, are unnoticed. The exuberant delight of the pinnacled groups of Mediæval work, and the conscious efficiency of the great domed structures of other days, convey emotions of totally different nature. Gothic burst upon the world as the result of an architectural eruption from the crater of human expression. Religious enthusiasm reared, in a day, such a forest of offerings to high heaven that there is no period in history which can compare in the volume and tension of its abandonment to building. The crafts guilds, the members of which devoted their lives to the building passion of the day, with only one idea, directed the new school of building. Foundations were laid in their hundreds, and man was raised to one of his greatest periods as an artistic creature. The divine fire was in all men, and it burned in all their works. Such a condition does not now prevail. Christianity has become more closely wedded to charity, offerings take more practical form, and, much as it may move our artistic souls to sorrow, we must, I fear, seek other sources of inspiration. Churches are built, but they arise out of less mystery and romance. Their beauty is intended more to satisfy man than to appease God, and what we, in these days, can do without the old inspiration is but little.

The whole religious question raises apprehension as to the future of ecclesiastical architecture. Love and money are not now spent in a national rearing of such idols. Church building has become more a matter of business consideration. Committees discuss the cost at so much per sitting, Architects—in competition—strive to supply the article at that much; while people ask, Why is it that our modern Gothic lacks the spirit of the old? It would be a miracle if it did not. As architects, however, we have a great inheritance, and to him with a soul to stir, these monuments of ecstasy will ever remain as an inspiration and as a manifestation of the heights to which high ideals can raise both man and his work. We live in their shadow and we see them in the light of thankfulness.

The instructive period of the study of architectural styles is that of their birth and early development, the step by step of their growth which relates so clearly the ordinary need of time and place and the simple constructive answer. No

ingenuity has been called into service. I am convinced that our lesson lies in this and this alone. Our museum of something like 7,000 years' collection is our greatest burden if we refuse the truth of it. The stock-in-trade, from which we lazily draw, has begotten our stunted accomplishments and we remain contented with the ease of it.

There are many things which have combined to bring about this condition of things, and a word of excuse must be allowed in consideration of the difficulties surrounding the practising architect of the present day. It is an elementary truth that no architecture can be great which is not the natural outcome of the structure and the true expression of the plan. It is unfortunately common for architects to be called upon to produce a certain specified dignity out of a scheme which the demands of utility have robbed of all direct inspiration. Site values, cost of building, and revenue, together tax ingenuity to the utmost, so that the greatest possible commercial value may be attained. Planning in the grand manner becomes impossible. Nevertheless it is expected that the elevations shall express that very chosen character which has been denied to the plan. The position is absurd. The architect strives to create a dignified facing in a style—already approved—to an insignificant and cramped interior, and so nefariously appropriates a noble ancestry to hide a meagre origin. "The skeleton in the cupboard" must be hidden from the public eye, so that the truth be not known. How to surmount this difficulty who shall say?

Given the freedom of a plan of scale and proportional distribution the design of the elevations becomes a comparatively simple matter and the parts will fall together with astonishing success. Such opportunities, however, are rare. More often, the architect's skill is taxed to create out of tier upon tier of compartments—each occupying an insignificant area—an appearance of breadth and dignity of occupation which is altogether false. He forces the introduction of masses of constructive detail, so that the eye is diverted from the direct contemplation of the proportion of voids and solids. All the Renaissance, good and bad, is at his disposal, and more often the bad suits his purpose better than the good. Engaged columns, entablatures, broken pediments, swags, shields, all are juggled into make-believe, sometimes so dexterously that the result is admirable. But it is admiration for the "sleight of hand" which has so ably succeeded in deception. Were the whole truth and nothing but the truth to be told, the result would bear the first quality of good design, but what would the client say? So must critics, at times, deal leniently with the man who, in his perplexity, has chosen between two evils, remembering that, however much they would like it, our streets are not lined by Italian palaces.

The architect is confronted daily with such problems, and if he fails to find the right solution it is only what must be expected. It is easy to write of high ideals and to cry out for unflinching loyalty to the truth, but it is easier to turn to the drawing-board and break every one of them.

"Design in truth and build in beauty" is a worthy ideal which it is well to nurse, but it appears at times to the faint-hearted that the world stands four square against it. Some, however, are more optimistic, and still believe that by keeping this ideal constantly before us good must come. If there can be no beauty without truth, then we must aim at preserving the truth in as great a measure as possible. We must relinquish it grudgingly and, as we progress, seek to recover what has lapsed.

Architects do not care to risk their reputation on experimental effort, as the heroes of the air risk their lives with such marvellous readiness. The endeavour to display in design the direct outcome of constructive need—at the same time wedding that need to the temper of the design—is a making of terms both tactful and sound. Architecture, at its best, shows that the problem of pure construction has been faced with candour and incorporated as the basis of form and detail.

To-day a new constructive element has appeared which as yet has been denied the right to govern form. It is too revolutionary, however, to stand aside. The powers of reinforced concrete are too great, and architectural veneer too small, to admit of any doubt. The accepted classic rules are unsuitable, for they grew out of different materials. To subdivide the spans of a ferro-concrete interior with brick or stone bays, expressing the limitations of a less expansive material, is inartistic, and, whether we like it or not, some new way must be invented.

Great spans, such as this construction makes possible, affect scale, we complain. But long years ago the domes of Byzantine churches created a similar disturbance in the minds of their builders. We have only to look and see with what success the difficulty was then overcome.

Our house must be put in order. The problem must be faced in the same practical manner, and our heads must no longer be buried in academic sand. The engineer and the architect in past days were one. Science has advanced the engineer to independent greatness, and the architect must needs advance himself into partnership, so that they two may become builders in the best sense.

Architecture is talked of as a thing of two sides, constructional and artistic. Surely all decorative art is constructional in its composition. Architecture, being primarily constructive, cannot be denied the same inter-association. To separate the two is impossible, since without the one the other cannot live. Many have attempted to tell the difference between building and architecture with no success. What a poor thing architecture is when it claims superiority to building!

To cry out for the past will avail nothing. As

well-wishers of architecture we must study the past in all its greatness and apply its lesson in all truth. Out of the melting-pot of ideas will come some new thing to carry conviction. The new will not be forced back to the old, but for the needs of the new we must know the best of the old.

It is worth repeating that the most fruitful periods of the old are the births and early lives of the styles. The down grade can be told in a chapter, yet what volumes of it are thrust before the trusting student in spite of the glower of facts. I am conscious of the pitfalls which abound and of the inconsistencies inevitable in the reasoning upon which I have embarked. The subject is hedged around by the clash of practice and theory. If it would appear that history has been decried, let it be clear that the complaint is not against history, but against the too ready acceptance of its face value.

REVIEWS.

TWO BOOKS ON ENGLISH CASTLES.

1. *The Early Norman Castles of the British Isles. By Ella S. Armitage. With Plans by D. H. Montgomerie, F.S.A. Medium* 8*o. Lond.* 1912. 15*s. net.* [*John Murray, Albemarle Street, W.*]
2. *Military Architecture in England during the Middle Ages. By A. Hamilton Thompson, M.A., F.S.A. Illustrated by* 200 *Photographs, Drawings, and Plans.* 1912. 7*s.* 6*d. net.* [*Henry Frowde, Oxford University Press.*]

It is refreshing to receive, within a few months of each other, two useful books on the much neglected subject of English castles. Since, moreover, the first deals mainly with the historical side of the earlier castles, and the second treats of their architectural and archæological aspect and carries the subject further chronologically, the one book forms a pendant to the other. The two works are therefore a welcome addition to our scanty literature about castles in general, which has hitherto been confined practically to the two volumes of the collected papers of the late Mr. G. T. Clark.

The object of Mrs. Armitage's book, as her publisher's prospectus states, is "to prove that the castles built by the Normans in England, Wales, Scotland, and Ireland were, with very few exceptions, earthworks with wooden buildings upon them; and further, that there is not the least reason to suppose that the Anglo-Saxons or any other pre-Norman race in these islands ever threw up the earthen mounts which have been so commonly assigned to them of late years. An attempt is made to show that, even on the Continent, the private castle was not universally established until the triumph of feudalism in the tenth century. A catalogue is given of the castles which can be historically traced in England to the eleventh century, and in Wales, Scotland, and Ireland to the eleventh or twelfth, with ample notes from the original, and sometimes unpublished, sources concerning them. In order to further the very difficult study of castle architecture, lists are given of the castles which can be with certainty attributed to fixed dates, and an endeavour is made to throw light on the development of castle-building in the eleventh and twelfth centuries."

Mrs. Armitage's arguments have already appeared in print, in the *English Historical Review*, the *Antiquary*, and elsewhere, but are here presented in a revised and enlarged form. They challenge a theory put forth by Mr. G. T. Clark, that the moated mounts and appendent baileys formed by banked enclosures, which constitute the basis of a very large proportion of our earliest castles, are identical with the burhs (or fortified towns) of the Anglo-Saxon Chronicle. It is now a matter of general acceptance that Mr. Clark was wrong, but everyone knows how hard it is to dispel a theory when once it has appeared in print.

Mrs. Armitage's book is divided into twelve chapters, to which are added eighteen short appendixes and a schedule of English castles known to date from the eleventh century. The bulk is occupied by five chapters of interesting historical and descriptive notes on the castles of the Normans in England, and on what Mrs. Armitage prefers to call the "motte-castles" of North and South Wales, and of Scotland and Ireland, all illustrated by a good series of plans. The last chapter, on the "Stone Castles of the Norman Period," is somewhat unequal, and marred by several contradictions and important omissions. The book ought too to have been more efficiently indexed, but it is nevertheless a good one, and deserves special notice as being the outcome of much patient original research on the part of a lady.

Mr. Hamilton Thompson's book is, according to his preface, an attempt "to trace the growth of the general principles of medieval fortification, with special references to castles, in which, within their limited area, the most complete illustration of those principles is given. In order to give greater clearness to the account of their evolution, a prefatory chapter deals generally with earlier types of fortification in Britain, and the critical period of Saxon and Danish warfare is treated in the second chapter with some detail. This leads us to the early Norman castle of earthwork and timber; and the stone fortifications to which this gave place are introduced by a brief account of the progress of siege-craft and siege-engines. The Norman castle and its keep or great tower are then described. The developments of the later part of the twelfth century and the arrangements of the thirteenth-century castle, with those of the dwelling-house within its *enceinte*, follow and prepare the way for the castles of the reign of Edward I. which represent the highest effort of military planning. In the last two chapters is related the progress of the transition from the castle to the fortified manor-house, which followed the introduction of firearms into warfare and preceded the Renaissance period."

For the clear and logical way in which Mr. Thompson has worked out his subject, in the twelve chapters of his book, we have nothing but praise, and the architectural side has been efficiently dealt with, notwithstanding a too scanty series of plans, which should have included at least those of Chepstow, Carnarvon, and London. The subject-matter too would have gained had the author depended more upon facts than the works of Mr. G. T. Clark and M. Viollet-le-Duc. Mr. Thompson seems, moreover, to have overlooked the excellent accounts of castles in the published volumes of the Victoria County History. He would there have found a more correct plan of the singular castle of Berkhamsted than that in Mr. Clark's book which he reproduces, as well as the suggestion offered that the unfinished series of bastions encircling part of the castle formed platforms for the engines that hurled *damnosos lapides* against the great tower in the siege so graphically described by Roger of Wendover. To this and other contemporary English chroniclers Mr. Thompson might also have turned for facts about the sieges of Dover, Windsor, and Bedford castles that would probably have served his purpose as well as the imaginative speculations of the ingenious Frenchman whose drawings he has likewise borrowed.

A little investigation, moreover, would have shown Mr. Thompson that the Roman fort of *Gariannonum*, like all of its type, had a fourth wall, and that *Othona* and *Anderida* were not towns, but merely two forts of the Saxon Shore; a visit to *Othona*, too, would have shown him that Cedd's ruined church stands athwart the site of the western and not the eastern gate.

Mr. Thompson ought surely to be aware that the fortress now called the Tower of London was almost as wholly *within* the medieval, as it was originally all within the Roman city wall; and that the White (or Great) Tower could hardly have formed (p. 38) one of the Conqueror's *firmamenta* of 1067 when it was not begun to be built until twenty years later. A visit to Colchester, or even a reference to Mr. Clark's plans, would also have made it clear that the great tower there, on account of its exceptional size, had two cross-walls instead of one, and that the present entrance into the basement, like the huge vice just within it, is an early insertion.

Mr. Thompson will perhaps pardon our mentioning one or two other points.

Ludlow should also have been quoted (on p. 89) as an early example of the association of a newly planned walled town with a pre-existing castle.

The chapel in the outer ward of Windsor Castle (p. 109) was ordered to be built in 1240 by Henry III., and had already practically become collegiate before the foundation of the Order of the Garter in 1348 by Edward III., who only refurnished it. The present St. George's Chapel was begun to the west of the older one of St. Edward in 1477 by Edward IV. There were still earlier chapels of Norman date in both the outer and the inner wards, as well as a third chapel in the great tower.

The great tower of Guildford Castle (p. 128) has been shown by Mr. Malden to be, like that at Conisborough, a later insertion in the ring wall of the mount; and the great tower of Scarborough Castle (p. 129) stands within the inner bailey, and not athwart its wall.

The gate-house at Rockingham (p. 226) has been tampered with, and its flanking towers seem to have been lowered.

Shuttered embrasures like those at Alnwick (p. 242) existed on the tower of Stokesay, and could doubtless be found elsewhere if looked for.

With the magnificent brick tower of Tattershall (p. 352) should be mentioned the smaller and somewhat later tower, also of brick, in the bishop's palace at Buckden, which was obviously copied from it.

The castle of Pevensey (p. 360) did not belong to the mount and bailey type, but, as recent excavations have shown, had a great tower of unusual plan standing in the bailey.

These, and some other minor defects that could be pointed out, detract but little from the excellence of Mr. Thompson's work, and can be corrected in a second edition, which, owing to the general interest and value, as well as the low price (*7s. 6d.*) of the book, will doubtless soon be called for. The startling statement on p. 248 can then also be modified, that certain loops in Warkworth Castle were designed for a cross-bow sixteen feet long!

Mr. Thompson has given us quite an imposing bibliography of castle literature, and his book seems to be efficiently indexed, but the names of persons and places and his "*index rerum*" should have been combined. The illustrations are mostly photographic, and both admirable and well chosen, but why has not the author given a list of them?

W. H. St. John Hope.

STRUCTURAL MECHANICS.

The Principles of Structural Mechanics, treated without the use of Higher Mathematics. By Percy J. Waldram. 8o. Lond. 1912. *7s. 6d. net.* [*B. T. Batsford, 94 High Holborn, W.C.*].

In a treatise on the elements of any subject we do not expect anything new; thoroughness and simplicity seem to be the only things that can be aimed at. In this book on mechanics, Mr. Waldram not only has done this, but he has brought his imagination to bear upon matter which has by this time been worn threadbare by mathematicians and other utilitarian folk.

To the majority of students the study of structural mechanics is a dry proceeding, mainly because most of the authors, while dealing with the subject adequately enough no doubt, do not present it as a thing having much humanity about it. This Mr. Waldram has done, and we have the

old stuff put before us in a fresh, interesting, and almost literary manner. It is not what he says, but how he says it, that distinguishes this book from the many well-known and good books on the subject.

The author tells us that he has been "forced to the conclusion that the study of first principles has hitherto been treated in too brief and cursory a manner," but the student who perseveres "in the apparently tedious process of building up all his knowledge from first principles is rapidly rewarded by finding this somewhat dry subject instinct with a life and interest which is largely obscured by the more rapid mathematical treatment." He is therefore very careful in the early portions of his book to cover the ground deliberately and thoroughly. His explanation of the elementary facts of action and reaction is specially pleasing and characteristic of his method: "it should be carefully noticed that material never hits back any harder than it is hit, and if you kick a wall with a 5 lb. kick you feel no more than a 5 lb. reaction; it may be quite capable of exerting a 300 lb. reaction, but it does not do so except under a 300 lb. provocation: it hits back in very much the same manner that it is hit." Again, "it takes two to make a quarrel, and it takes two equal and opposite forces or reactions to make up what we understand as simple tension or simple compression."

We had thought that there was nothing new to be said about the theorem of the parallelogram of forces: perhaps nothing new is said in the book, but it is certainly presented in a fresh manner: the geometrical proof with which one invariably sets out is not dealt with until the student has been led through a series of experiments, by means of simple apparatus, to grasp the action of forces about a point, and instead of the funicular polygon being considered as a mere inert diagram or figure drawn out to explain some chain of reasoning—a static method of dealing with a problem of dynamics—it is regarded more as a tool or apparatus, and as such lends itself to a dynamic treatment of the problem.

The subject of moments is dealt with at considerable length: one is convinced that many students do not master the idea of moments until after they have been acquainted with the word for years, perhaps because the word "moment" as used in mechanics seems to be one of those words in our language which has an air of detachment about it in that it does not automatically fall into its place in any category of ideas.

Coming to the question of bending moments in beams and cantilevers, the identity of the balanced cantilever with the ordinary see-saw is well brought out. Of course there is nothing new in this, but the author has realised, quite rightly, that the beginner sometimes has a difficulty, owing to preconceived ideas as to gravity, in grasping the fact, almost necessary to the proper comprehension of the action of forces on beams and cantilevers, that the whole of the operations can be reversed with the same result: indeed, it is often easier to grasp the essential point if we fix our mind more directly upon the reactions acting upwards at the bearings, than upon the load acting downwards.

The point as to the inadvisability of regarding the ends of girders as fixed is clearly brought out. This is important, as it is not obvious to a beginner why rolled steel joists bolted to steel stancheons, with, say, four $\frac{3}{4}$-inch bolts, should not be regarded as having fixed ends. But this is a fallacy to which sufficient attention is often not given even in practical building work. This important point is again emphasised in the chapter on deflection, and in the author's remarks on continuous beams.

In dealing with the modulus of rupture we are told that this is the same whether the section is large or small; this is, of course, correct if you can be sure that your large section is as consistent as the smaller section from which you have deduced your M.R. by experiment; we are, however, inclined to think that if experiments were made upon far larger samples of materials than has hitherto been the case, it is possible that our views would be modified somewhat as to their modulus of rupture. This is a point having little or nothing to do with the use of a factor of safety.

The chapters on deflection and shear are good, the latter being treated at much greater length than is usual in an elementary handbook and is summed up as follows: "Although the deflection of a cantilever is the result of the stretching of one flange and the compression of the other, its amount is also affected by the depth which determines the initial gradient, and by the length, which determines the effect of that gradient, and also the amount of stretch." After having read Mr. Waldram's previous explanation this sentence sums up the question of deflection in a nutshell.

His way of thinking of a beam when under central concentrated load as a double cantilever that is upside down like a see-saw is used with felicity to explain vertical shearing stress.

There are four chapters on retaining walls and foundations in which the author continues his method of explaining by common-sense illustration the way in which walls are stressed by the pressure of the earth behind; and having in the earlier portions of the book explained with considerable care the theory of bending moments he is able to make clear to the student such technicalities as the angle of repose, co-efficient of friction, the reason for batter on the outer face of a retaining wall, and stepping to the inner face against the earth, and the general principle underlying the construction of those reinforced concrete walls having a broad base; &c. All this without the endless and complicated pages of formulæ which

students often find so heartbreaking, simply because he has in the earlier portions of the book taken unusual care to explain the underlying principles.

The chapter on roofs seems to be the least satisfactory, probably because so much explanation is attempted in so little space. In order thoroughly to grasp the reasoning the student would require a more detailed knowledge of graphic statics than the author gives in chapters 7, 8, and 9. For instance the somewhat complicated stress diagram for hammer-beam trusses, fig. 152, is explained in part only. This would be sure to muddle a student, who will probably have forgotten the explanation of the particular use of the link polygon, fig. 41, quite early in the book; a reference back to this figure seems essential.

The same criticism applies to many of the figures illustrating the author's remarks on arches and domes. In some cases more explanation is necessary to elucidate the figure, or at any rate cross-references to earlier figures to jog the student's memory as to points which, if not appreciated in their special connection, would prevent the student following the explanation given.

One of the best chapters in the book deals with columns. The author makes a really successful attempt to dig out the meaning of the words "radius of gyration," which it will repay any student to master. Many books merely muddle him by saying that the radius of gyration is the square root of the moment of inertia divided by the area, or something to that effect. To do this and nothing more is merely evading the question under cover of some words of important sound. One of the most popular of text-books from which we ourselves have suffered does this without previously defining "moment of inertia."

The book finishes with a chapter on shoring, which might well have been omitted, as the subject has been treated more adequately elsewhere; it seems to destroy the continuity of idea in the book.

From its somewhat colloquial method of treatment, we should imagine that this book has been compiled from a series of lectures delivered many times and amplified as occasion demanded to meet points of difficulty presented by students, rather than a cold-blooded attempt to write *de novo* on elementary mechanics.

Turning to smaller points there is a misprint in the bottom line of p. 61. In fig. 38 the figure 3 is missing from the structure diagram although referred to in the force diagram. A reference to the various equations from one part of the book to another by means of letters or numbers would be helpful. There is a mistake in grammar in the sixteenth line page 352.

The author is to be congratulated upon producing a book unique of its kind, which should be a help to all students.

W. E. Vernon Crompton [*F*].

TOWN EXTENSION.

Old Towns and New Needs: also the Town Extension Plan: being the Warburton Lectures for 1912. *Delivered by Paul Waterhouse, M.A.* [*F.*], *and Raymond Unwin* [*F.*]. 1*s. net.* [*The University Press, Manchester.*]

These lectures by Mr. Waterhouse and Mr. Raymond Unwin are thoughtful additions to the literature of Town Planning worthy of record.

Mr. Waterhouse's lecture deals with the new needs of old towns, whereas Mr. Unwin suggests economic and advantageous lines of development.

Mr. Waterhouse gives us some excellent advice as to what to do and what not to do in the alterations necessary to render an old town suited to modern requirements, and points out that as an old town cannot be recreated, what is done to add to its convenience should be remedial rather than revolutionary. Also that it is desirable to surround an old town by an open belt or girdle of cheerful and definite garden before a new outward development begins.

The lectures were delivered in Manchester, and both lecturers kept the needs and conditions of that town before them in their observations.

Mr. Raymond Unwin shows that it is not necessarily more profitable to pack the maximum number of houses upon an acre of ground, and gives a diagram illustrating how, if properly developed, a limited number of houses per acre is not only beneficial to the community but financially advantageous to both builders and landowners.

Again, he very properly impresses the necessity of thoroughly understanding the life and needs of the community before making any propositions for the extension or development of a town, and shows that a town plan, if wisely made, can assist industry and do much for the health and convenience of a community, and that it is as necessary for mental and spiritual health that men should live in beautiful surroundings as it is for their bodily health that they should dwell under sanitary conditions.

The publication of these lectures should secure for them a wider usefulness than would have been possible if limited to the auditors who were fortunate enough to attend their delivery.

David Barclay Niven [*F.*].

THE MODERN COTTAGE.

Modern Cottage Architecture, illustrated from Works of well-known Architects. Selected and Described by Maurice B. Adams, F.R.I.B.A. S. roy. 8*o. Lond.* 1912. *Second Edition, revised and enlarged.* 10*s. net.* [*B. T. Batsford,* 94 *High Holborn, W.C.*]

Much credit is due to Mr. Adams for his interesting work dealing with this modest theme, and it is to be hoped that the younger generation of our profession will read and thoroughly digest the many hints as to practical details which the book contains. In plain language the author advises us to be "natural" in designing our work, and to avoid the fussy details frequently adopted by the

so-called "practical man." It would be a great advantage to architecture generally if the British public would read the section on "The Economical Aspect of Artistic Building." Therein is contained a little sermon which should go far to convince every level-headed layman that even in the humblest class of cottage building it is cheaper in the long run to employ a capable architect than to place himself in the hands of the pretentious speculating builder. Possibly a cheap edition of the work would answer the purpose. The book is amply illustrated with plates representing some of the pick of modern work by well-known architects, and the selection could hardly be improved upon, except perhaps by the introduction of a few more interior views. C. E. HUTCHINSON [*A.*].

Forthcoming Books.

Mr. Batsford will publish in a few days *A Short Critical History of Architecture*, by Mr. H. Heathcote Statham [*F.*]. The work, which is profusely illustrated by photographs and drawings, gives a concise history of the development of architecture in such a manner as to render it not a mere statement of facts, but a critical commentary on the merits and weaknesses of the styles and buildings described and illustrated.

Mr. E. S. Prior [*F.*], Slade Professor of Fine Art in the University of Cambridge, and Mr. Arthur Gardner have completed an important work on *Mediæval Figure Sculpture in England*, which will be published this month by the Cambridge University Press. The authors claim that English sculpture since the Saxon days has been a specific growth—*sui generis*—from its own stem, however much it has bent to the breezes of Continental fashion. Owing to the enormous destructions of its examples scarcely more than one per cent. of the figure sculpture of the Middle Ages has come down to us. What remains, however, is not scanty in itself and the 855 illustrations which the work contains have been selected from about three thousand photographs, while probably more than three times that number of actual objects of sculpture have at one time or another been brought to the notice of the authors.

Books Received.

Architectural Drawing and Draughtsmen. By Reginald Blomfield, A.R.A. With 103 illustrations. Sm. 4o. Lond. 1912. 10*s.* 6*d.* net. [Cassell & Co., Ltd.].

English and Welsh Cathedrals. By Thomas Dinham Atkinson. With 20 illustrations in colour by Walter Dexter, R.B.A., 20 in monotone, and 48 plans. 8o. Lond. 1912. 10*s.* 6*d.* net [Methuen, 36 Essex Street, Strand].

Reinforced Concrete Construction. Advanced Course, with numerous fully worked examples. By M. T. Cantell, Licentiate R.I.B.A. 243 illustrations. La. 8o. Lond. 1912. 12*s.* 6*d.* net. (13*s.* post free in U.K.) [E. & F. N. Spon, Ltd., 57 Haymarket.]

Surveying and Surveying Instruments. By G. A. T. Middleton [*A.*] Third Edition, revised and enlarged. 8o. Lond. 1912. 5*s.* net. [Whittaker & Co., 2 White Hart Street, Paternoster Square, E.C.].

The Cheap Cottage and Small House: A Manual of Economical Building. By J. Gordon Allen [*A.*]. With over 100 illustrations. 2nd Edition. La. 8o. Letchworth. 1912. [Garden City Press, Ltd., Letchworth].

Altbuddhistische Kultstätten in Chinesisch-Turkistan, von Albert Grünwedel. Berlin. 1912. fol. 60 Marks. [Georg Reimer, Verlagsbuchhandlung, Berlin W. 35, Lützowstrasse 107-8].

9 CONDUIT STREET, LONDON, W., 19*th October* 1912.

CHRONICLE.

The Hon. Secretary R.I.B.A.

Members will regret to hear that Mr. Henry T. Hare, who has been suffering in health for some time, is considered not yet sufficiently recovered to make it prudent for him to return to London. During his absence his duties as Hon. Secretary of the Institute will be discharged by the senior Vice-President, Mr. E. Guy Dawber.

St. George's Hall, Liverpool.

The Council at their meeting on Monday the 14th inst. passed the following resolution, a copy of which has been forwarded to the Liverpool City Council :—

"The Council of the Royal Institute of British Architects has seen with regret the City of Liverpool's plans for altering the southern termination of St. George's Hall. The Council believes that alterations to such a building are only justifiable when inevitable, and trusts that in view of the widespread opposition of architects to any interference with St. George's Hall the City Council will reconsider the matter."

The Care of Ancient Monuments.

The Joint Committee of the two Houses of Parliament on the Bills now before the House of Lords relating to the preservation of ancient monuments met last Wednesday under the chairmanship of Lord Plymouth, and heard evidence from Sir Schomberg McDonnell, Mr. Reginald Blomfield, A.R.A., *President R.I.B.A.*, and Mr. C. R. Piers, F.S.A.

In answer to the chairman, Sir Schomberg McDonnell expressed the view that procedure by Order in Council was preferable to a preservation order, inasmuch as the latter did not provide for keeping up a monument or restoring it, but only prevented damage being done. He was in favour of allowing an owner to sell if he desired, provided the monument was under the care of the Commissioner of Works' Department. The new owner would have to take over the obligations of the former one. As regards ecclesiastical buildings,

plans of proposed restorations or additions should be submitted to the Advisory Board, which should get the Bishop of the diocese to move in the matter by asking him not to allow certain things to be done. He would go so far as to suggest that the Advisory Board should not only advise but, if necessary, intervene. A chief inspector of monuments should be appointed for Great Britain, with four assistants for England, four for Scotland, and two for Wales. He also suggested the desirability of giving grants in aid in respect of monuments maintained by county councils.

Mr. Reginald Blomfield said that the cathedrals of England, which were the most important national monuments in the country, had suffered much from reconstruction and restoration within the last hundred years. In his view the Advisory Board should be strengthened and its functions more clearly defined. The Royal Commission should also take observation of monuments of later date than 1700, as some of the most charming buildings in England had been erected since then. Absolute power should be given to prevent the export of buildings of historic interest to foreign countries. He questioned the suitability of the Office of Works to deal with all ancient buildings, and suggested that a civic department should be created for the purpose, and that the Advisory Board should have wider powers and a stronger representation than was proposed.

Mr. C. R. Peers, Inspector of Ancient Monuments, urged that a preliminary schedule of recognised monuments of historic interest should be prepared, to which nothing should be done without the consent of the Office of Works or the Advisory Board.

A New Exterior for Buckingham Palace.

A note in *The Times* of the 11th inst. states that for some time past the Executive Committee of the Queen Victoria Memorial have had under consideration the advisability of improving the front of Buckingham Palace, in order to bring it into harmony with its new surroundings. Sir Aston Webb, C.B., R.A., was invited to submit plans with this object in view, and these plans have now been approved by the Executive Committee, which consists of Lord Esher, Lord Plymouth, Lord Redesdale, Sir John Stirling-Maxwell, and Lord Beauchamp, First Commissioner of Works. The policy of the Committee has been to complete one section of the whole Memorial at a time, and it is for this reason that the improvement of the exterior of Buckingham Palace has been delayed. Sir Aston Webb's designs for the Admiralty Arch, the Mall, and the Memorial in front of the Palace were chosen from the designs submitted by five invited architects. The Committee therefore considered it desirable that Sir Aston Webb should be asked to prepare plans for the last stage of the complete scheme—the improvement of the face of the Palace. A frontage of classical design made of Portland stone will take the place of the present exterior. No alteration of the interior of the building is contemplated, but it is obvious that the work cannot be undertaken while their Majesties are in residence at the Palace. Nothing will be done therefore until next summer, but the work will then be pushed forward as quickly as possible, in order that it may be finished before the King returns to town in the late autumn. The cost of the scheme is estimated at about £60,000, and will be defrayed out of the funds of the Memorial Committee. The rebuilding will be in the hands of Messrs. Leslie and Co.

City Traffic and St. Vedast's Church.

A few weeks ago *The Times* published a plan of the region surrounding the western end of Cheapside, showing the line of the new thoroughfare to be made in connection with the proposed St. Paul's Bridge, and pointed out the inevitable effect that this new thoroughfare must have in enhancing the already well-nigh intolerable congestion of the traffic passing north, south, east, and west along Newgate-Street, Cheapside, St. Martin's-le-Grand, and the eastern end of St. Paul's Churchyard.

Mr. Arthur Crow [*F.*], and later Mr. W. H. Seth-Smith [*F.*], had already pointed out in *The Times* that a new thoroughfare must sooner or later be constructed running from the end of Newgate Street, as directly as may be, to London Wall, Liverpool Street, and Bishopsgate. *The Times* in a leading article last week recurs to the subject and says :—

> Here then emerges the question to which our correspondents have called attention none too soon. It may not become an immediately practical question for some years to come, but it is rendered an immediately urgent one by the fact that the old Post Office in St. Martin's-le-Grand is now in process of demolition, and that a new Telephone Department is to be erected on its site, occupying not merely the whole of the area thus vacated but some extension of it over the existing open space to the southward. This, in our judgment, would be a fatal and irreparable blunder. The new building, if extended on the southern side of the old, and, indeed, if not appreciably curtailed in that direction, will make it impossible to construct any new thoroughfare towards Liverpool Street without compelling all the traffic passing from Newgate Street to the new thoroughfare, or *vice versa*, to round an extremely awkward corner at the southern end of the new Telephone building and to pass through a bottle-neck between that building and the houses which stand between Newgate Street and Paternoster Row. Moreover, even that awkward turn could hardly be made at all unless St. Vedast's Church in Foster Lane, a beautiful example of Wren's work, were demolished. That consideration alone should give pause to the several Government Departments and other authorities concerned before their sanction is given to the plans for the new Telephone building. But it is also backed by the further consideration that even if St. Vedast's Church were demolished—surely an act of gratuitous vandalism—nothing but a bad and bungling job could be made of the business of facilitating the traffic between Newgate Street and the new thoroughfare.

The thing is so obvious that we need expend no argument in insisting on it. Even if St. Vedast's Church were not in question at all, it would still be desirable, if not absolutely necessary, so far to curtail the new Telephone building at its southern extremity as to allow the construction of the proposed thoroughfare on its natural and proper alignment.

The writer urges that both the new Telephone building and the new thoroughfare being imperative, it is the manifest duty of all the authorities concerned to see that one of these necessities is not allowed by any default, neglect, or lack of due consideration and consultation on their part to interfere with the other, and concludes:

On all these grounds we would urge again that the question must not be prejudged by the further prosecution of the existing plans for the new Telephone Department unless and until all the authorities concerned, and all who are entitled to a *locus standi* in the matter, have had full opportunity of conferring together and considering it in all its bearings. Among those entitled to a *locus standi* in the matter we include, of course, architects of eminence and repute. That is the important principle which was recognised and established in the case of the St. Paul's Bridge, and it certainly ought to be applied in this case also.

International Building Exhibition, Leipzig, 1913.

An International Building Exhibition, with Special Supplementary Exhibitions, is to be held in Leipzig next year from May to October under the patronage of the King of Saxony and the hon. presidency of the Chancellor of the German Empire and of the Ministers of State of Saxony. This will be the first International Exhibition ever held entirely devoted to building, and its primary object is to demonstrate the progress made in the art during the last twenty or thirty years. It is desired that dwelling-houses, their plan and internal arrangements, furniture and decoration, shall be a special feature of the Exhibition. The area appropriated to the site is about ninety-nine acres, which will be extended if necessary. The exhibits will be divided into sections as follows:—

I. Architecture. Eight Groups, with thirty-three sub-sections.
II. The Literature of Architecture and Building; Technical Educational Institutions; Office Requisites for Architects and Engineers. Three Groups.
III. Building Materials, their Manufacture or Preparation and Use. Twenty Groups, with twenty-four sub-sections.
IV. Machines, Tools, and Apparatus used in Building. Five Groups, with two sub-sections.
V. Sale and Purchase of Building Land; Building Finance; Estate Agencies; Insurances in Connection with Dwelling-houses; Book-keeping for Builders and Architects. Five Groups.
VI. Building Sanitation for Dwellings, Factories, and Streets; Protection of Workers from Injury, with First Aid and other Provisions for their Health and Comfort; Precautions against Fire; Old Age and Invalid Insurance. Six Groups.
VII. Gymnastics, Games, and Sports.
VIII. Testing of Building Materials; Technical Demonstrations.

The Special Supplementary Exhibitions will accommodate various subsidiary branches of Architecture and Building, such as Lighting, Glass, Frescoed Halls and Dwelling-rooms, Tapestried Rooms, etc. A detailed prospectus and various papers relating to the Exhibition may be seen at the Institute. The offices of the Directorate are at Windmühlenweg No. 1, Leipzig.

Lectures on Timber, for Architects.

The attention of architectural students is called to the special course of lectures and demonstrations on Timber, for Engineers and Architects, now in course of delivery by Professor Groom in the Department of Botany at the Imperial College of Science and Technology, S. Kensington. The lectures in Part (*a*) of the subject (delivered Tuesdays and Thursdays, 2 P.M. to 3 P.M., beginning 8th October 1912) deal with the structure, identification, and physical properties (strength, elasticity, weight, colour, durability, &c.) of timbers commonly used for engineering purposes (in houses, in mines, on railways, for paving blocks, &c.) in Europe; the structural characters determining the qualities of these; defects in timber—their identification and their effects on the various physical properties of wood; methods of improving the qualities of various timbers (including "impregnation," &c.). The lectures in Part (*b*), on the Structure, Defects, and Diseases of Timber (delivered on Tuesdays and Thursdays, 2 P.M. to 3 P.M., beginning 12th November, and ending 12th December 1912), will deal with the anatomy and histology of wood; the critical identification and characters of various kinds of timbers; defects in dead wood and diseases of living trees caused by various fungi—their diagnosis, ætiology, prevention, and cure; defects due to insects, to physical agencies (such as insulation, frost, drought, wind, lightning, &c.), to chemical substances (in smoke), and other causes. The prospectus intimates that it is desirable that those who attend this course should also have attended the preceding course (Timber, for Engineering Students).

The New Delhi.

The question of the choice of an architectural style for the new capital of India has been the subject of an interesting correspondence in *The Times* and other papers, and some useful suggestions have been put forward—notably by Mr. Herbert Baker [*F.*], Lord Curzon [*Hon. F.*], and Mr. T. G. Jackson, R.A. Mr. Herbert Baker favours the idea of the Classic style of Jones and Wren and their followers in the eighteenth century, as being easily adaptable to the needs of a tropical climate. Without losing its more "eternal" qualities and finer national characteristics, this style he considers should gain in freedom and power of expression by adaptation and expansion to the needs of a more southern climate.

It may be asked (says Mr. Baker) whether the employment of such a style rules out any of the nobler features of Indian architecture. The colonnade and arcade—two or three deep, if need be—the open court of audience, are common features in southern classical architecture. The deep portal arch of Persia and India has its prototype in the classical exedra common in the Roman bath and well known in the Vatican. The pride of Indian architecture, the dome, has its highest manifestation in St. Paul's. And the magnificent ground-planning of the Taj Mahal is but an Eastern example of the "grand manner" of the West.

There should exist, therefore, in the style which has been advocated, all the necessary elements ready to the hand of the architectural alchemist. But to the artist's creative power must be added sanity of judgment. He must avoid a Whitehall on the one hand, and a Palace of Delight which might come perilously near a "White City" on the other. His architecture must have the spirit of life and of growth, so that it may take root in the country and not prove sterile and unproductive in the generations to come. There must be no conscious straining after invention or originality, to which sincerity in following the true and natural laws alone can give birth. There must be good building and a frank acceptance of modern methods and materials. The controlling mind must heat and weld into his orderly conception all that India has to give him of subtlety and industry in craftsmanship. And, lastly, he must so fire the imaginations of the painters, sculptors, and craftsmen of the Empire that they may, interfusing their arts with his, together raise a permanent record of the "history, learning, and romance" of India.

Lord Curzon thinks that some form of the Classic style is well-nigh inevitable. The form of this style, he says, which has been most widely adopted by the English in India, and of which the best extant examples are to be found at Calcutta and Madras, is that which was simultaneously planted by English colonists in America and the East. It may be described as a colonial adaptation of the Palladian style.

The same style in less pretentious forms (continues Lord Curzon) was adopted by the merchant princes and magnates of Calcutta, and procured for it the somewhat ambitious title of the City of Palaces. The main ground of its suitability to Eastern conditions of life is that it admits of large and lofty rooms, with ample window space, and that the dwelling apartments can be shielded from the heat and glare of the sun by broad verandahs and colonnades. . . .

I am far from contending that this style should be reproduced in its severe and sometimes inartistic simplicity at Delhi. Perhaps it may be feasible to adopt there some richer and more imaginative variant of the classical conception. If we follow the latter style from its reappearance in Europe at the Renaissance down to the eighteenth century, we shall see that wherever it sprang afresh it took on some features peculiar to the country of its adoption. Historic conditions, the conditions of climate, the standards of life, stamped upon it a different character. But of all these forms, that which seems to be richest in possible suggestion for the East, because it was largely affected by Oriental ideas, was the Renaissance architecture of Spain, some of the most exquisite features of which are a visible legacy from the Moors. There are palaces and town halls and public buildings erected in this style in Spain, which the traveller seldom sees, but which are among the most beautiful structures in Europe.

Possibly the selected architect of the new Delhi, if he makes some such choice, may find in the country itself, in the models which he sees around him, in the spirit of the East, or in the talents of native craftsmen, something which will give a similar Indian flavour, a native *aura*, to the forms of the West.

Mr. T. G. Jackson, who deprecates the selection of any definite architectural style, says :

This is not the way in which to get the best architecture. Our best artistic suggestions for design come from necessities of construction and considerations of utility. *Nunquam vera species ab utilitate dividitur.*

To seize on these suggestions and draw inspiration from them is the true path for the architect to follow; to be able to meet them and satisfy them successfully is the proper end of all architectural study. We should study works of art, not to copy them, but to be impregnated with their principles; and if our study has done its work we should be so saturated with the true principles, not of this or that particular style, but that of architecture itself, which is a very different matter, as to be ready for any novel conditions that may present themselves.

Such conditions no doubt do present themselves at Delhi, and there could be no more splendid opportunity for a sensible development of architecture. The first considerations should be purely utilitarian : what sort of construction is demanded by the climate, the social habits of the inmates, and the functions the buildings are to fulfil. To think first of the style, and try to bend and warp an old one to suit the case, is to begin at the wrong end, and will only ensure another of the many disastrous architectural failures of which India has been the field. The very difficulties that present themselves in the way of using a ready-made style should be regarded as the most fruitful source of inspiration for good design. As the conditions are novel, so to the same extent no doubt will be the result. The utilitarian problem must be faced boldly and come before everything else. Whether the forms that best solve it conform to any existing style or not is of quite secondary consequence. That they should to a certain extent regard precedent is, of course, inevitable; we cannot forget the past, but they must not be fettered by any conventional formula. Whether they will be beautiful or not will depend solely on whether the architect is a true artist or merely an engineer. For the artist only differs from other men in this—that he does gracefully and beautifully the same things that the inartistic man would do, usefully perhaps, but unattractively.

British School at Rome : Scholarship in Architecture.

Candidates who are eligible to compete in the open qualifying examination for the Scholarship in Architecture at the British School at Rome offered by the Commissioners for the Exhibition of 1851, full particulars of which were published in the JOURNAL R.I.B.A. of the 31st August last, must apply in writing to the Hon. General Secretary, British School at Rome, 54 Victoria Street, London, S.W., for particulars of the subject set for the examination, on or before the 31st October. The subject will be forwarded by post on the 5th November to intending candidates, who must be careful to write distinctly in their applications their full names and addresses.

OBITUARY.

The late William Frederick Unsworth.

Mr. W. F. Unsworth, of Petersfield, died quite suddenly at his residence at Steep, near Petersfield, on the 6th inst., at the age of sixty-one. He was apparently in good health on the previous Friday, when I had the privilege of taking breakfast with him at the Arts Club, and seemed quite well on Saturday morning, but was seized with heart failure in the evening and passed away the same night.

William Frederick Unsworth was articled in 1869 to Messrs. Wilson & Wilcox, of Bath, and after a year's travel in France was for two years in the office of the late George Edmund Street, and for a year with the late William Burges. He started practice in London in the year 1875, and scored his first success in the competition for the Shakespeare Memorial Theatre and Library at Stratford-on-Avon, which he was commissioned to carry out. The design of this building shows a strong feeling towards French Gothic, and it may be allowed that this feeling was in great measure due to the influences which still dominated one who had worked in the office of William Burges. But Unsworth's sympathies, judging from his later work, were more in accord with the best traditions of English Mediævalism, and it was this spirit that influenced him in his later productions.

Unsworth brought to the execution of his work an enthusiasm that occasionally was almost feverish in its intensity, and a knowledge of style that gave distinction to all his buildings, whether domestic or ecclesiastical. His detail was especially interesting and charming. He had made a profound study of the best examples of the work of the past, and was particularly happy in the adaptation of old work to modern requirements. His designs for wrought-iron work, which were peculiarly pleasing, take high rank in this class of work. He was, too, among the earliest of the rapidly increasing number of architects who have given attention to garden planning. His own garden at Steep, merely an ordinary cottage garden when he first took up his residence there, became soon transformed in accordance with his ideas of what a country garden ought to be. He had the knowledge and the artistic ability to take advantage of what to most would have been considered insurmountable difficulties, and produced a small but perfect specimen of an old English garden. "A formal garden"—I can imagine him saying—"yes, but don't forget that flowers are for the garden, and should be the first consideration."

Unsworth was of a delicate constitution, and was always longing for the sun, and railing at our rain and fogs. Had he been more robust, it was in his nature to have felt and seen beauty even in rain and fogs. But he was for the sun, and this feeling took him to Algeria in the winter of 1910, and again to that country last winter. With his usual enthusiasm he devoted his time while there to the study of gardens, making careful drawings and sketches of many of the old gardens along the coast of North Africa, the south of Spain, and Tangier. These, I am in a position to say, will not be wasted endeavour, as there is a probability of their appearing very shortly in book form. I have had the advantage of reading a few chapters and of seeing some of the sketches, and have formed the opinion that the book will be of the greatest interest and a valuable addition to garden literature.

Among Unsworth's architectural works I should like to mention, as well worth a visit, a small brick-fronted warehouse, built in 1883, which is quite hidden away in Star Yard, at the back of Chancery Lane. Other notable works are his restoration of St. Mary's Church, Horsell, Surrey; Christ Church, Woking, and subsequent enlargement; church at Woodham, Surrey; chapel of the King's School, Warwick; Rossall School Chapel; Sion House, Strabane; houses at Harrogate and Burnham; additions to Selsdon Park, Sanderstead, etc. He was formerly in partnership with Mr. Dodgshun, in Old Queen Street, Westminster; then practised alone in Old Palace Yard, Westminster, and latterly, in conjunction with his son and Mr. Inigo Triggs, at Petersfield. He was elected an Associate of the Institute in 1882, and proceeded to the Fellowship in 1891.

T. E. Collcutt [*F.*]

Francis Edward Masey, of Salisbury, Rhodesia, whose death occurred in that city on the 3rd September from pneumonia, at the age of fifty-one, was elected Fellow of the Institute in 1901. His connection with the Institute dates back to 1887, when he won the Soane Medallion and £50 with a design for City Police Courts and Police Station. In the following year he was awarded a Medal in the Tite Prize competition, and in 1889 and 1891 Medals in the Owen Jones Studentship competition. Mr. Masey was the third son of the late Philip E. Masey, architect, of London. He served his pupilage in the office of his father, and in 1878 entered the office of the late Alfred Waterhouse, R.A., with whom he remained till 1896. He became a student of the Royal Academy in 1887, and during 1889 and 1890 spent some time travelling in Italy and France. In 1896 he joined Mr. Herbert Baker [*F.*] in partnership in Cape Town, and was jointly responsible with him for some of the most important buildings in South Africa. These include, in Cape Town, the Cathedral, the Rhodes Memorial, the City Club, buildings for the De Beers Company, Churches of St. Barnabas, St. Michael, St. Philip, &c. Works in other parts of the country included the Mafeking church, the Shangani Memorial to Major Wilson, the Kimberley Siege Memorial, buildings of the Diocesan and South African Colleges, and Dale College, King Williamstown.

The domestic work of the firm is known all over South Africa, and includes houses for Cecil Rhodes, S. Marks, P. A. M. Cloete, Carl Jeppe, and J. J. Bissett. Recently Mr. Masey started an independent practice in Rhodesia: the Salisbury Club, the Board of Executors, the new St. John's Church at Bulawayo and the Bulawayo Museum are examples of his work there. He was an enthusiastic antiquary, contributor to various journals, founder of the South African National Society for the Preservation of Objects of Historic Interest, and filled for some time the Chair of Architecture at the South African College. He was largely instrumental in the formation of the Cape Institute of Architects, and was first President. Mr. Masey enjoyed the affectionate regard of a large circle of friends here and in South Africa. His talents as an artist were widely recognised, and his untimely death in the zenith of his powers is deeply mourned. The local newspapers report that a large gathering, fully representative of the community, assembled in the Pro-Cathedral on the occasion of the funeral. The officiating clergy were the Bishop of Mashonaland, the Dean of Salisbury, and the Rev. E. J. Parker, the final office at the interment being read by the Bishop.

CORRESPONDENCE.

Architects from George IV. to George V.

September 1912.

To the Editor, JOURNAL R.I.B.A.,—

SIR,—Mr. Maurice B. Adams' Paper, under the above title, read before the Glasgow Institute finds a worthy place in the JOURNAL. It is good that those who have made their mark in the profession should not be forgotten, particularly when men like Mr. Adams can speak of many of them from personal acquaintance The Paper is, I venture to say, well and entertainingly written, and I have thoroughly enjoyed its perusal. Many thoughts, in reminiscence, arose in my mind during the reading, and I should like to be permitted to put them down as a sort of Addendum to the Paper.

Mr. Adams speaks of Sir John Soane (p. 601) as the "Master of commonplace Greek," but I believe most of us will agree that the Bank of England, and the Treasury in Whitehall, should have saved Sir John from such a criticism. Mr. Adams refers, rightly, to Sir John Soane (p. 602) as being the architect of "Holy Trinity, Marylebone," and a little lower down on the same page he mentions "Marylebone Church" as if the two churches were the same. St. Marylebone Church, opposite York Gate, was built by Thomas Hardwick—and a previous design for the same church had been made by Sir William Chambers.

Sir Charles Barry's early taste for redundant ornament "reasserted itself" (Mr. Adams says) "in his Gothic work." During the war between the respective sons of the two great architects of the Houses of Parliament I remember I was told to go and look at Barry's Gothic church off the Farringdon Road and ask myself the question whether the man who built that could possibly have designed the Gothic work of the Houses of Parliament. I did look at the church, and I formed an opinion which shall remain in that jewelled casket the key of which is in my possession only.

Curiously enough, Mr. Adams omits to mention (except in a line on p. 644), in speaking of Sir James Pennethorne's work (p. 602), that remarkably fine building of Pennethorne's, the University of London in Burlington Gardens, with its fine sculptural groups; and he also omits reference to the Public Record Office in Fetter Lane (except in the Appendix, p. 647). I remember a little episode which occurred *re* the building in Burlington Gardens. Pennethorne's first design was Venetian Gothic—but the Government would not have it, and it was changed to the present more Classic work. The Gothic building had got up some distance above the ground before the work was stopped, and when the foundations for the new design were being excavated a considerable quantity of the masonry for the Gothic structure was discovered buried neatly away. The masons had made mistakes in the work, but little thought that their blunders would be brought to light in their own lifetime.

Mr. Adams mentions (on p. 602) various cements in use at the dates set forth, but he omits "Medina cement," which was, I think, in vogue about those times, and which I have myself used.

The mention of P. Hardwick (p. 604) reminds me of another little episode—it may, however, only be a story. Hardwick prepared a design for the present Drummonds' Bank at Charing Cross, and it is said that Drummonds told Hardwick that they expected his personal and careful attention to the work. Hardwick said that he would give that work no more, and no less, of his personal attention than he gave to any other of his works; the result being that a high-class firm of builders was substituted for Hardwick, and when the work was completed the outcry was such that the upper part was altered as we now see it.

The mention of Scott and Grimthorpe recalls to my memory the delight I took in the controversies over St. Albans—how Scott was "chucked" by Grimthorpe, how Grimthorpe and his able clerk of works will be handed down to a remote posterity by the splendid building work of Longmire & Burge; how Canon Venables "went for" Grimthorpe in *The Times*, and how the future noble Lord pounded Venables by his ruthlessly unpolished rejoinders; how Grimthorpe deceived a certain Archæological Society, how that Society retaliated by spiteful reference to the "Jubilee Coin" *tracery* in the new north transept; how Grimthorpe "chucked" the R.I.B.A. because

they ridiculed the "arched cill" of his great western window; and how he ever after referred to the said R.I.B.A. as "The Trade Union Society of No. 9 Conduit Street."

Mr. Adams, in referring to the Architectural Museum (p. 606), reminds me of a lecture by Wm. Burges at Tufton Street. In speaking of a certain piece of tile paving he remarked: "I don't know who made the design, and I don't care, but it is a d——d bad one." Another amusing thought arises on Mr. Adams' reference to the Society of Architects (p. 606). Many years ago, when Seth Smith was its President, I accompanied the Society on their visit to Belgium, when King Leopold had consented to receive the Society at his Palace at Ostend. The steamer was late, and we had to put ourselves into "plated harness" (otherwise "evening dress") in the afternoon. The day was wet and muddy; the accommodation provided for the forty or so members, and the wives of some of them, at certain houses on the quay was limited, and—and—but I must leave Mr. G. A. Middleton to complete the story, as he was our "introducer" to His Majesty.

The mention of the name of J. L. Pearson (p. 607) reminds me of his beautiful work at the Houses of Parliament towards Parliament Square at the side of Westminster Hall, and of that Gothic gem on the Victoria Embankment near the Temple for the offices of Mr. Astor. Pearson's trouble at Peterborough Cathedral should have quieted the Society for the Preservation of Ancient Monuments for about a century. As to the work of Raphael Brandon, what a pity it is that his Irvingite Church in Gordon Square is still without the tower and spire which he designed for it!

I remember so well the delightful little conversation I had with James Brooks (p. 607). The Liverpool Cathedral competition, in which Brooks took part, and his chagrin at the whole business, loom up before me in unpleasant recollections, as does the more recent Liverpool Cathedral competition in which I was weak enough to take part.

The reference to William Burges' house (p. 643) reminds me of the visit I paid to it and of the beautiful mediæval illuminations and artistic work therein displayed; and I agree with Mr. Adams that Lord Leighton's house is not so interesting as that of Wm. Burges. I shall always remember my visit to Lord Leighton's house because when I entered the "Court" I was struck by the beauty of a picture opposite me, and, in approaching nearer, I went splash into the gold-fish pond, which I had not noticed was between me and the picture. I was the more annoyed at this as a certain gentleman with whom I was at the time at war (in the *Building News*) was looking on at my discomfort.

In speaking of Burges' design for the Law Courts (p. 643) Mr. Adams omits to mention that most beautiful detail of a portion of the Strand front (French Gothic)—the detail drawing of which was, I think, made by Mr. Phené Spiers.

E. W. Godwin (p. 643) I remember by his contemplation of the decorations of a ceiling at a certain house at Chelsea, viewed, lying on his back, with some friends, male and female, in a like position, in order to judge the effect from that which he said was the right position.

The reference to George Edmund Street's works on p. 643, amongst them his church of SS. Philip and James, Oxford, reminds me of the inclination of the south wall of the chancel of that church eastwards, to represent, symbolically, the inclination of our Saviour's head on the Cross. I remember, too, the finely carved caps of the nave columns of that church, which I had the pleasure of sketching.

In mentioning the names of some of the most able architects of their day (p. 643) Mr. Adams refers to Wm. White, and well I remember that when he and another departed architect, Mr. Dawson, got on their respective legs at the Institute there was little chance for anyone else during the evening. S. S. Teulon always connects himself in my mind with "Luton" bricks, and his fine church of St. Stephen's at Hampstead shows the value of their use. John P. Seddon's kindly presence I also recollect, and I owe him thanks for supporting my idea of a "podium" at St. Martin's Church.

A glance at the long list of names in Mr. Adams' "Appendix" to his Paper shows the very great pains he has taken to complete his little history, and he and I are, fortunately or unfortunately as the case may be, old enough to have seen and heard many of the men, great in their respective ways, mentioned. The Pennethornes, James and John, the latter the discoverer of the Greek architect's respect for optical illusion, as shown in the Parthenon; James Fergusson, E. B. Lamb, the designer of that most original and beautiful church of St. Martin, Gospel Oak; Owen Jones; Edmund Sharpe; S. S. Teulon; Ewan Christian, and his amusing references to certain parts of St. Mark's at Venice; Lord Grimthorpe; George Godwin; F. C. Penrose; John Ruskin; Beresford Hope; Wyatt Papworth; Professor Kerr, and his real good oratory at the Institute; George Aitchison, full of artistic attributes, and a "District Surveyor" at the same time; Arthur Cates; Sir Arthur Blomfield; F. P. Cockerell, and many others, stand before me recalled to memory by Mr. Adams' Paper.

Of the Past Presidents whose portraits adorn our walls, not to mention those still, happily, surviving within our ranks, I can call to mind with pleasure Sir Gilbert Scott, Charles Barry, John Whichcord, George Street, Sir Horace Jones, Ewan Christian, Edward I'Anson, Alfred Waterhouse, Francis Penrose, and George Aitchison.

I must now bring this little "Addendum" to a close or I shall be "crowded out" of the JOURNAL, and I conclude by the fervent hope that there will be another Maurice B. Adams to write an equally good Paper on the Architects from George V. to . . . . . WM. WOODWARD [*F.*].

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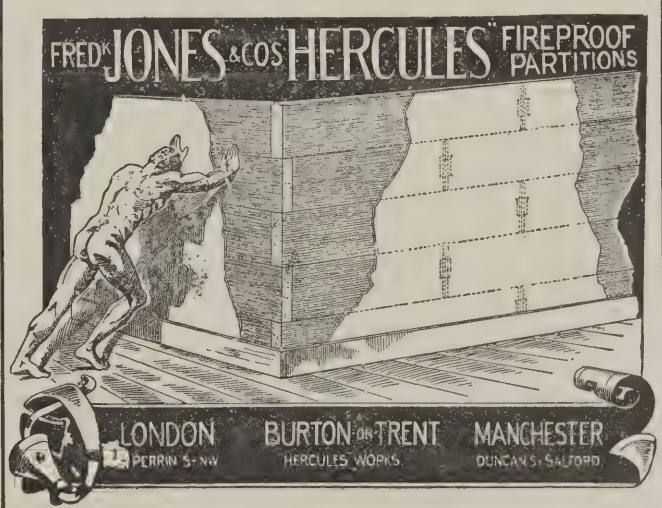

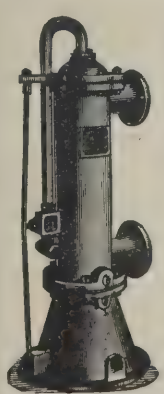

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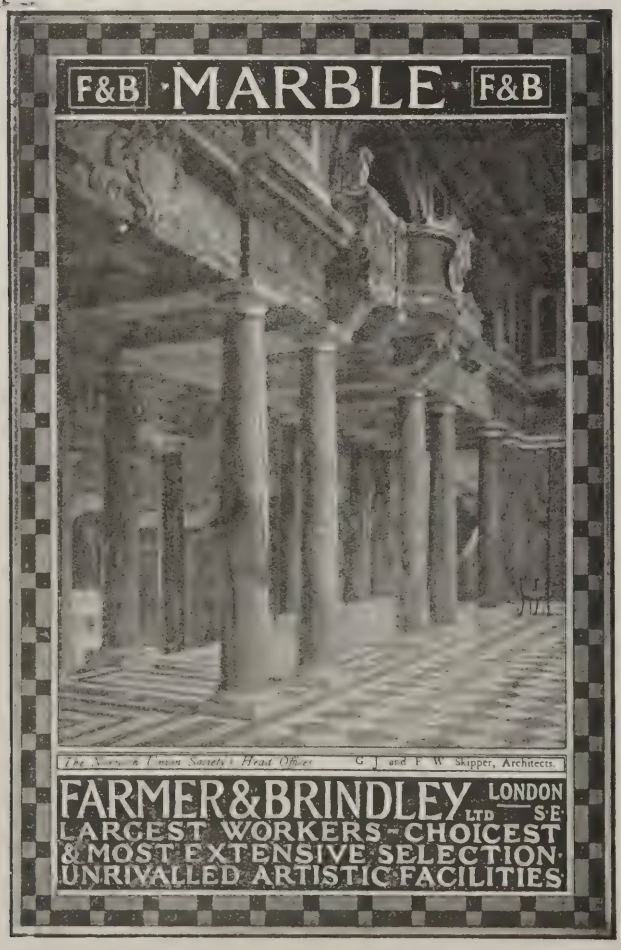
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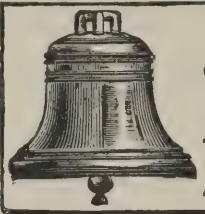

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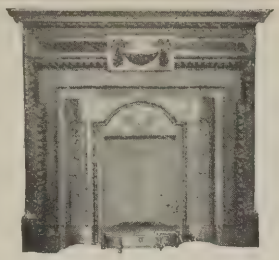

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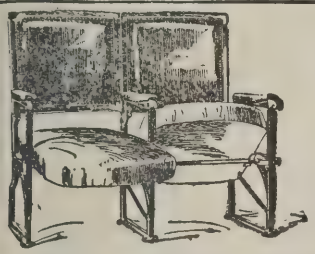

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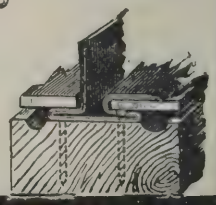

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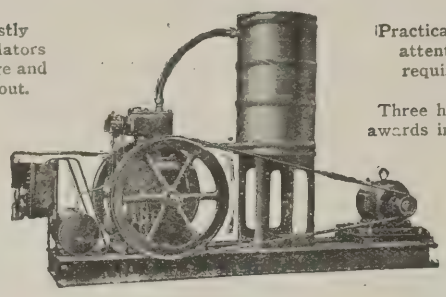

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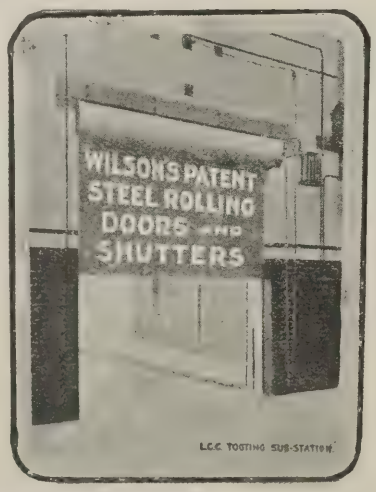

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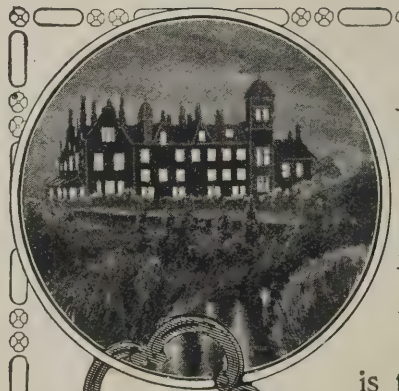

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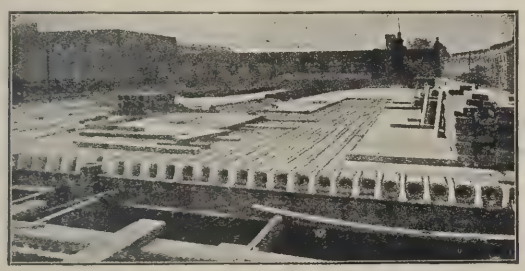

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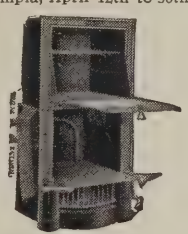

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